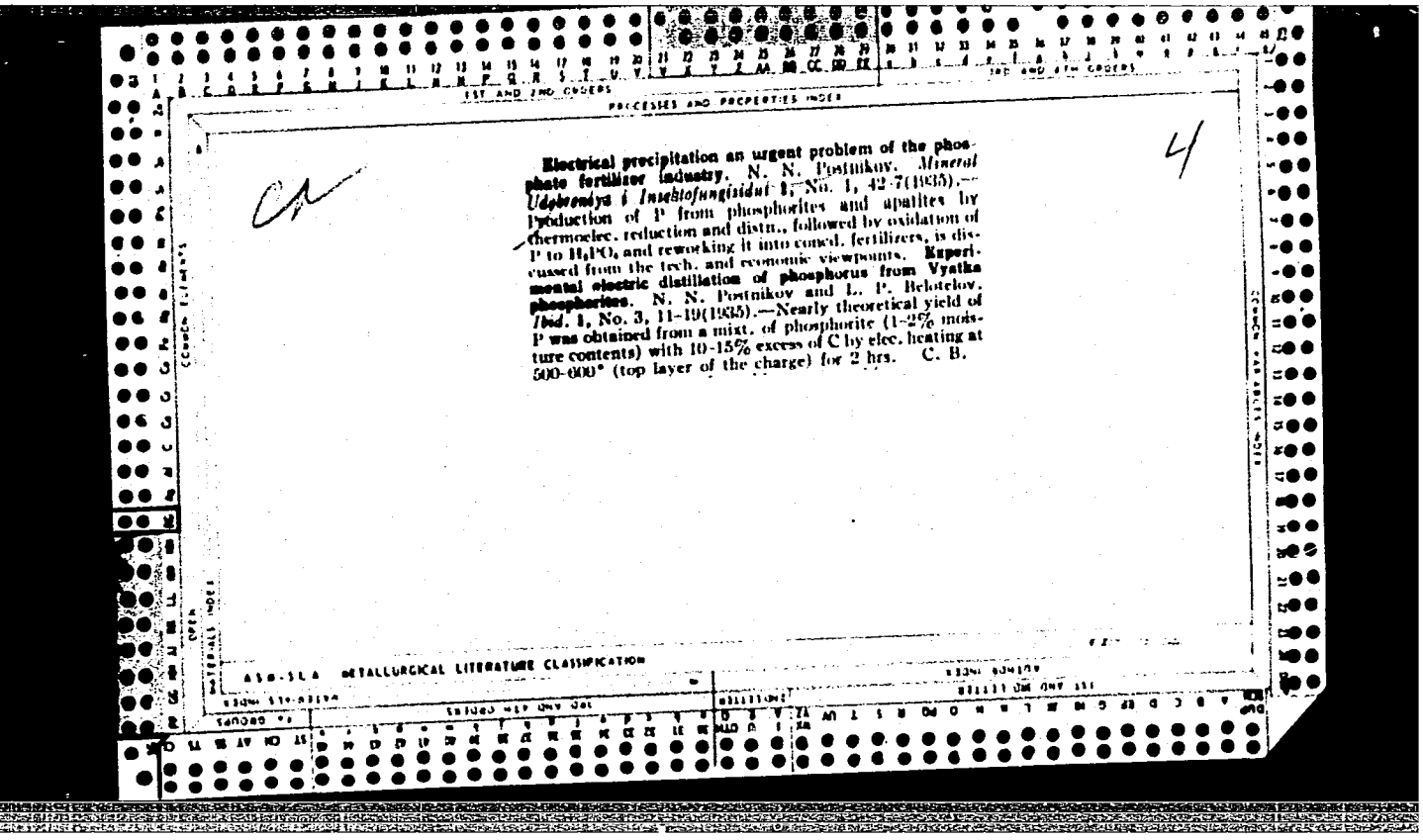
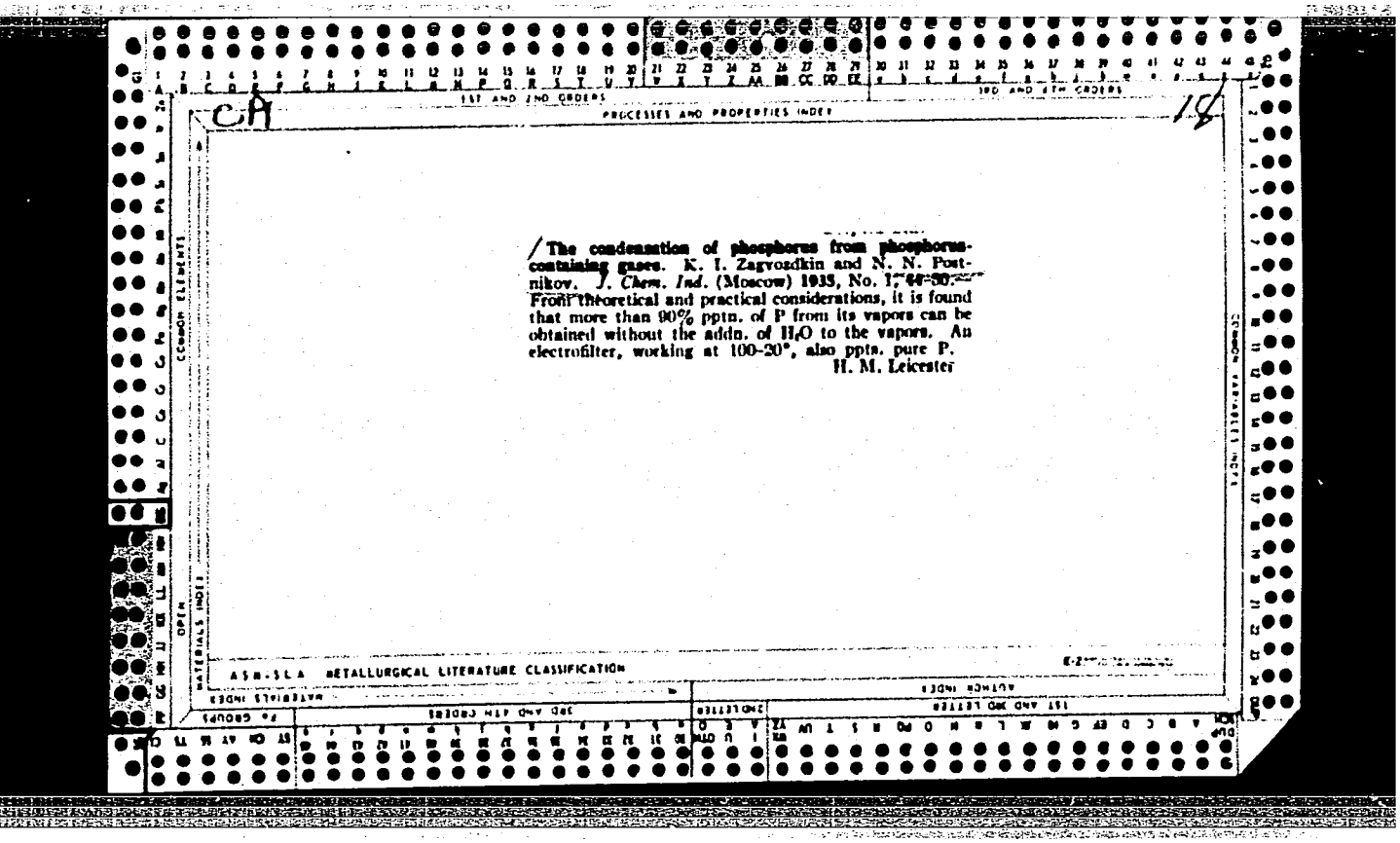


PROCESSES AND PROPERTIES INDEX

Electrical precipitation an urgent problem of the phosphate fertilizer industry. N. N. Postnikov. *Mineral Udobreniya i Insektofungisidui* 1, No. 1, 42-7(1935).—Production of P from phosphorites and apatites by thermoelec. reduction and distn., followed by oxidation of P to H_3PO_4 and reworking it into concd. fertilizers, is discussed from the tech. and economic viewpoints. **Experimental electric distillation of phosphorus from Vyatka phosphorites.** N. N. Postnikov and L. P. Belotelov. *Ibid.* 1, No. 3, 11-19(1935).—Nearly theoretical yield of P was obtained from a mixt. of phosphorite (1-2% moisture contents) with 10-15% excess of C by elec. heating at 500-600° (top layer of the charge) for 2 hrs. C. B.

4

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



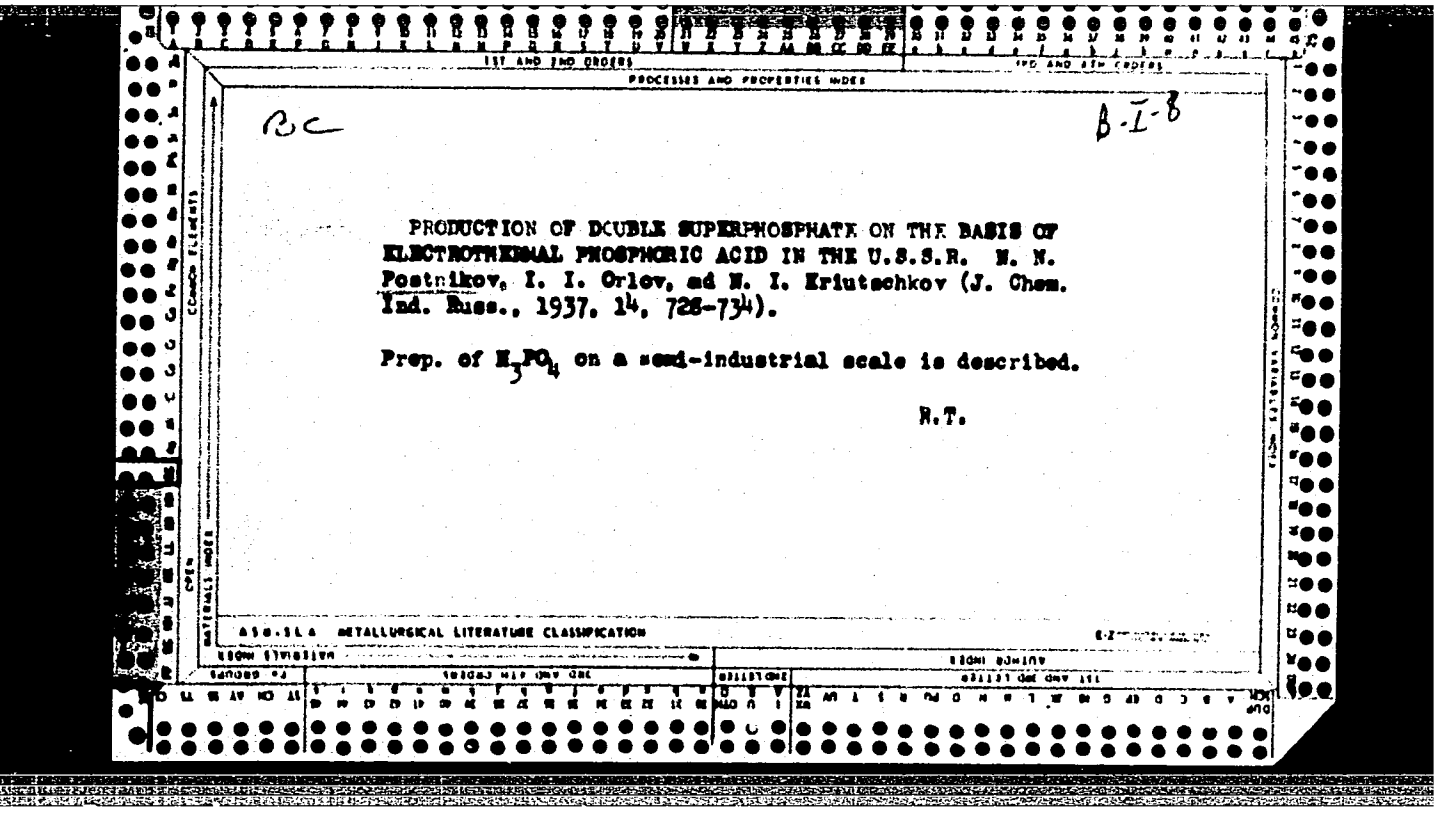
CA

PROCESSES AND PROPERTIES INDEX

18

The condensation of phosphorus from phosphorus-containing gases. K. I. Zagvozdkin and N. N. Postnikov. *J. Chem. Ind.* (Moscow) 1935, No. 1, 44–50. From theoretical and practical considerations, it is found that more than 90% pptn. of P from its vapors can be obtained without the addn. of H_2O to the vapors. An electrofilter, working at 100–20°, also ppts. pure P.
H. M. Leicester

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



RC

B-I-8

PRODUCTION OF DOUBLE SUPERPHOSPHATE ON THE BASIS OF ELECTROTHERMAL PHOSPHORIC ACID IN THE U.S.S.R. N. N. Postnikov, I. I. Orlov, and N. I. Kriutschkov (J. Chem. Ind. Russ., 1937, 14, 728-734).

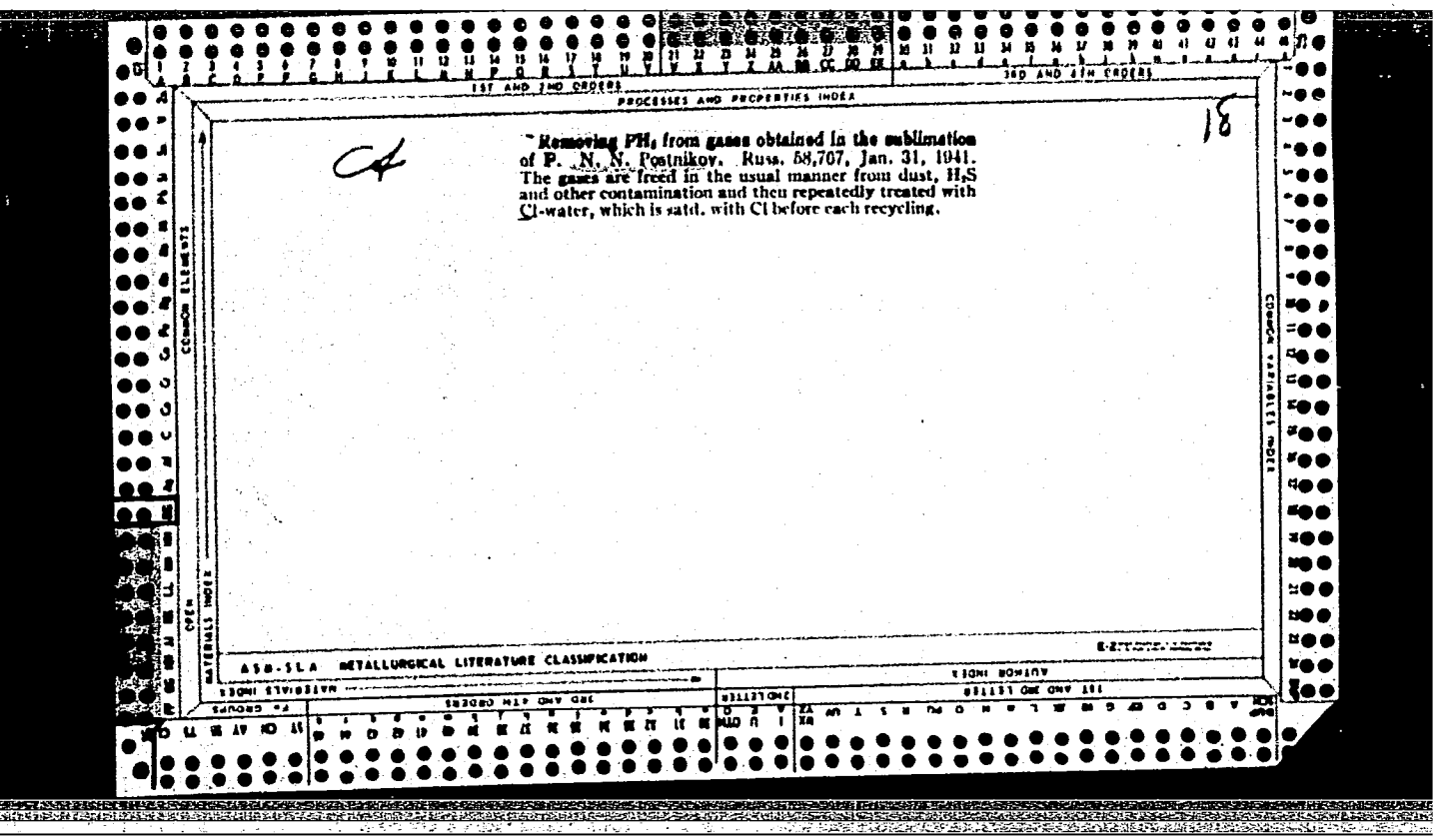
Prep. of H_3PO_4 on a semi-industrial scale is described.

N.T.

POSTNIKOV, N. N.

"Removing PH_3 from Gases obtained in the Sublimation of P," N. N. Postnikov, Pat 57,439 (USSR), 31, July 1940 (SEE: Inst. Insect/Fungi. im Ya. V. Samoylov)

SO: U-237/49, 8 April 1949



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

C4

18

"Removing PH_3 from gases obtained in the sublimation of P. N. N. Postnikov. Russ. 58,707, Jan. 31, 1941. The gases are freed in the usual manner from dust, H_2S and other contamination and then repeatedly treated with Cl-water, which is satd. with Cl before each recycling.

COMMON ELEMENTS

COMMON VARIABILITY INDEX

MATERIALS INDEX

OPEN

A58-SLA METALLURGICAL LITERATURE CLASSIFICATION

AUTHOR INDEX

POST NIKOV, N. N.

4

Regarding the paper by M. E. Pozin and A. M. Ginstling "The philosophic basis of the 'classical' theory of solid phase' processes." N. N. Postnikov. *J. Appl. Chem. U.S.S.R.* 27, 927-8(1954) (Engl. translation).—See *C.A.* 49, 2142c.

B. M. R.

Postnikov, N.N.

Regarding the paper by M. E. Pozin and A. M. Ginstling' "The philosophic basis of the 'classical' theory of 'solid phase' processes." N. N. Postnikov. *Zhur. Priklad. Khim.* 27, 991-2(1954).—The interpretation given by Pozin and Ginstling (*C.A.* 48, 9136g) of Angel's materialistic dialectics as applied to solid-phase processes is criticized.
I. Bencowitz

Regarding the paper by M. E. Pozin and A. M. Ginstling "The philosophic basis of the 'classical' theory of 'solid phase' processes." F. N. Tavadze and P. N. Dzhaparidze. *Zhur. Priklad. Khim.* 27, 992-5(1954).—The paper by P., and G. (*C.A.* 48, 9136g) is criticized with special reference to the dependability of the work of Tammann and Hedvall.
I. Bencowitz

Regarding the remarks of N. N. Postnikov, F. N. Tavadze, and P. N. Dzhaparidze regarding the paper "Philosophic basis of the 'classical' theory of 'solid phase' processes." M. E. Pozin and A. M. Ginstling. *Zhur. Priklad. Khim.* 7, 995-1000(1954).—A reply to the critics. 28 references.
I. Bencowitz

POSTNIKOV, N. N.

Relative reducibilities of synthetic and natural calcium phosphates. N. N. Postnikov, B. B. Evzlina, and O. V. Vasil'eva. *J. Appl. Chem. U.S.S.R.* 28, 549–54(1955) (Engl. translation).—See *C.A.* 50, 1255. B. M. R.

4

(2)

POSTNIKOV, N. N.

Subject : USSR/Chemistry AID P - 3488

Card 1/1 Pub. 152 - 3/21

Authors : Postnikov, N. N., B. B. Yevzlina, and O. V. Vasil'yeva

Title : Comparative reducibility of synthetic and natural calcium phosphates

Periodical : Zhur. prikl. khim., 28, 6, 579-584, 1955

Abstract : The experiments were carried out in a special furnace (UMG-type), a drawing of which is given. The composition of phosphorite and apatite ores as well as that of the synthetic and natural phosphates used in the experiments is given. The difference in the reducibility of the calcium phosphate and apatite groups, is ascribed to the difference in their composition. Three tables, 5 diagrams, 11 references, all Russian (1927-1951).

Institution : None

Submitted : F 20, 1953

POSTNIKOV, N.N., kandidat tekhnicheskikh nauk; IONASS, A.A., kandidat tekhnicheskikh nauk.

Thermic phosphates. Khim.nauka i prom 1 no.2:150-154 '56. (MLRA 9:9)

(Phosphates)

POSTNIKOV, N.N.

Phosphides of nonferrous and light metals. N. N. Postnikov, G. G. Nozadze, and O. V. Vasil'eva. U.S.S.R. 109,648, Feb. 25, 1958. 2 Cu-Ni, Al and other phosphides are obtained by thermal treatment of a mixt. contg. P, C, and the metal. As a source of P are used natural low-Fe phosphates, such as apatite concentrate, natural phosphorites, and others together with a flux. M. Hosch

6
2

Distr: 4Eli/4E2c

SOV/64-58-6-15/15

AUTHOR: Postnikov, N. N.

TITLE: State and Trends in Foreign Phosphorus Industries (Sostoyaniye i tendentsii fosfornoy promyshlennosti za rubezhom)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 6, pp 381-388 (USSR)

ABSTRACT: Among "capitalist" countries the United States rank first in phosphorus production. Great Britain, Canada, and West Germany have a relatively high production level. In 1956, US phosphorus production attained a level of 310 000 metric tons (Ref 1), phosphorus being produced by seven monopolies and one state-owned plant. The article mentions among large producers: "Monsanto Chemical Co.", "Victor Chemical Works", "Westvaco Mineral Products Division", "She Chemical Corp." (Shell?), "Oldbury Electrochemical Co.", "Virginia-Caroline Chemical Corp.", the state-owned plant of TVA, as well as the projected plants of the "Potash of America" and "Central Fertilizers" companies. The "Pittsburgh Coke and Chemical Co." and "Monsanto" are mentioned among the producers of insecticides. The article contains data concerning electric furnaces, electrochemical parameters, details of the construction of

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State and Trends in Foreign Phosphorus Industries

stationary furnaces, data of exploitation, etc., as well as figures illustrating the various data. It is mentioned in the case of electric furnaces with a rotating shaft that, according to A. S. Mikulinskiy (UNIKhIM), the USSR was the first to apply this production method. It is mentioned that Canada has two operating phosphorus plants, and that the British firm "Albright and Wilson" also has two phosphorus-producing plants. Exact details on the raw material sources, capacity, as well as figures of the furnaces are given. It is assumed that there are two plants in operation in West Germany, i.e. the "Lonza Works" and the"Stickstoffdünger A.G.". East Germany has two small plants, one at Bitterfeld and the other at Pisterits. In France there are the plants of the "Compagnie des phosphates tunesiens" and of the firm "Coignet". At present, there is one such plant in operation in Italy and in Switzerland the plant of the firm "Du Fonte Electrique". There are six plants producing phosphorus in Japan, and the firm "Albright and Wilson" as well as the "Australian and New Zeeland" Corporation in Australia. India is planning a plant with an annual capacity of 15 000 metric tons. There are 10 figures, 4 tables, and 32 references, 1 of which is Soviet.

POSTNIKOV, N.N.

Comparative reduction of tricalcium phosphate by gaseous reducing agents - hydrogen, carbon monoxide and methane, and solid-carbon. Zhur. prikl. khim. 31 no.9:1281-1284 S '58. (MIRA 11:10)
(Calcium phosphates) (Reduction, Chemical)

POSTNIKOV, N.N.; FRENKEL', M.G.; YEVZLINA, B.B.; SMIRNOV, A.I.; PLOTNIKOVA, V.I.

Composition and properties of defluorinated phosphates. Zhur. prikl. khim. 31 no.10:1453-1460 O '58. (MIRA 12:1)
(Phosphates)

SOV/20-120-2-44/63

AUTHORS: Postnikov, N. N., Mikhaylin, A. D.

TITLE: An Investigation of Diffusion in the System Tricalcium Phosphate - Calcium Oxide - Carbon by Means of the Radioactive Isotopes C^{14}, Ca^{45} and P^{32} (Issledovaniye diffuzii v sisteme trikal'tsiyfosfat - okis'kal'tsiya - uglerod s pomoshch'yu radioaktivnykh izotopov C^{14}, Ca^{45} i P^{32})

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 120, Nr 2, pp.378-380 (USSR)

ABSTRACT: In the investigation of the reduction mechanism and the kinetics of tricalcium phosphate by carbon the first author (Ref 1) set up the hypothesis that the velocity of process is limited by a mutual diffusion of reagents through the layer of reaction products (calcium oxide). At first the diffusion was investigated in the C - CaO system. Radioactive carbon was produced as soot by reduction of radioactive CO_2 by means of magnesium metal at 700°C. A second type of soot from acetylene and radioactive CO_2 did not show any great differences as compared to the former. Both consisted of

An Investigation of Diffusion in the System Tricalcium Phosphate - Calcium Oxide - Carbon by Means of the Radioactive Isotopes C^{14}, Ca^{45} and P^{32}

β-graphite (Table 1). Radioactive CaO was produced by annealing of Ca^{45} containing calcium carbonate. The dependence of the integral activity of the sample on the total thickness of the remote layers is to be seen in figure 1 as curve $I = f(x)$. From the diagram the activity values were determined and from them the difference $I_n - I_{n+1}$. Based on this difference the dependence of the change of activity on the depth of diffusion was constructed in coordinates $\ln(\Delta I - \mu I) = -(x^2)$ (Figure 2, 2). The values of the diffusion coefficient at different temperatures are shown in table 2 and figures 3, 1. The diffusion in the system $Ca_3(PO_4)_2$ - CaO: The determination of the diffusion of such a large tetrahedral ion as PO_4^{3-} is especially interesting for the investigation of the reduction of tricalcium phosphate. Tricalcium phosphate (radioactive phosphate) and chemically pure CaO were used as initial substances for this purpose. The method of production is described. From the obtained results the conclusion can be drawn that the sublimation process of phosphorus on the whole takes place in the solid phase and is limited by the velocity of the mutual diffusion. Therefore it is expedient to use a briquetted charge in the phosphorus sublimation in electric

An Investigation of Diffusion in the System Tricalcium Phosphate - Calcium Oxide - Carbon by Means of the Radioactive Isotopes C^{14}, Ca^{45} and P^{32}

furnaces, which offers a possibility to intensify the process on a reduction of temperature in the furnace tank. There are 3 figures, 2 tables, and 4 Soviet references.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungisidam im. Ya. V. Samoylova
(Scientific Institute for Fertilizers and Insecticides imeni Ya. V. Samoylov)

PRESENTED: December 31, 1957, by S. I. Vol'fkovich, Member, Academy of Sciences, USSR

SUBMITTED: December 28, 1957

1. Calcium oxide-calcium phosphate-carbon systems--Diffusion 2. Calcium isotopes(Radioactive)--Applications 3. Phosphorus isotopes(Radioactives)--Applications 4. Carbon isotopes (Radioactive)--Applications

POSTNIKOV, N. N. Doc Tech Sci -- (diss) "Study in the field of electrical sublimation of phosphorus from phosphate ores." [Mos, 1959]. 39 pp with graphs. (Acad Sci USSR. Inst of Metallurgy im A. A. Baykov, State Committee of the Council of Ministers on Chemistry. Sci Inst for Fertiliz[redacted] and Insectofungicides im Professor Ya. B. Samoylov), 150 copies. Printed by duplicating machine. List of author's works, pp 38-39 (18 titles).
(KL, 52-59, 119)

06235
5(1) SOV/64-59-6-27/28

AUTHOR: Postnikov, N. N.

TITLE: Present State and Trends of Phosphoric Acid Production (Thermal) Abroad

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 6, pp 544 - 551 (USSR)

ABSTRACT: An extensive survey of the thermal phosphoric acid production in the western countries is given. As an introduction a comparison between the thermal and the extraction methods for the production of phosphoric acid from American phosphorites is made (Table 1), and respective data by Vaggaman (Ref 5) are mentioned. A table (Table 2) of the firms producing phosphorus and phosphoric acid in the USA is presented, which contains data on the productive capacity and location of the various plants (as of June 1, 1957) as well as changes in the productive capacity concerning the different phosphates and phosphoric acid from 1947 - 1958 (Table 3). Furthermore 3 production plants (Figs 1-3, Scheme) for phosphoric acid of the Tennessee Valley Authority, and one plant of the Virginia Carolina Chemical Co. are described. Mention is made of the fact that steels AISI-316, AISI-329, and AISI-347 as well as cast iron and brass (Table 4, composition) were used as structural materials in the phosphoric acid plants. The phosphoric acid firms in Canada, Eng-

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Present State and Trends of Phosphoric Acid Production (Thermal) Abroad

06235
SOV/64-59-6-27/28

land, Western Germany, France, Switzerland, Japan, India, Australia, and Africa are briefly mentioned. Solely the production of phosphoric acid (Fig 5, Scheme) in Eastern Germany in Piesteritz is described in greater detail. The production of highly concentrated polyphosphoric acid (Fig 6) in the plant of the Tennessee Valley Authority is described. Finally, an explanation of the production of phosphoric acid by oxidizing phosphorus with water (under pressure with water vapor) is given. There are 8 figures, 4 tables, and 38 references, 8 of which are Soviet.

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5.4110

77503
SOV/80-33-1-12/49

AUTHOR: Postnikov, N. N.

TITLE: The Formation of Dust During Sublimation of Phosphorus in an Electric Furnace

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 1 , pp 65-70 (USSR)

ABSTRACT: The chemical composition (in %) of the dust formed during sublimation of phosphorus is shown in Table A.

P_2O_5	SiO_2	$(Fe\,Al)_2O_3$	CaO	MgO	K_2O	Na_2O	SO_3	F	C
48.8 *	19.6	3.7	3.2	1.3	13.7	6.1	0.62	1.0	-
34.2 *	24.3	4.5	3.9	0.9	11.5	5.9	-	-	-
31.5 *	16.9	5.8	6.3	0.8	8.8	9.6	-	-	-
28.25**	14.3	3.18	4.0	not found	12.5	7.58	not found	1.06	18.64
38.4***	19.6	-	16.3	"	13.7	-	"	1.1	1.6

* Analyzed at the Pisterits Plant laboratory
** Analyzed by O. V. Vasil'yeva at the Heat Laboratory of the NIUIF
*** Bixler's data (see first U.S. ref)

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The Formation of Dust During Sublimation of Phosphorus in an Electric Furnace

77503
SOV/80-33-1-12/49

The presence of P_2O_5 (as phosphate) in dust is due to the oxidation of phosphorus or phosphorus oxides in the upper region of the electric furnace by air oxygen, water vapor, and carbon dioxide. A large portion of the phosphates in the dust is water-soluble. Excessive loss of phosphorus during sublimation can be prevented by elimination of air oxygen, water vapor, and CO_2 from the electric furnace. This can be accomplished by treating the charge bunker with nitrogen or some other inert gas and by charging the furnace with dry, roasted material free of CO_2. The high percentage of SiO_2 in dust is due to reduction of silica with carbon in the high-temperatures regions of the electric furnace. Reduction of the silica can result in silicon monoxide or elemental silicon, which at the high temperature of the electric furnace undergo partial sublimation. The vapors of the reduced silica, after leaving the high-temperature region of the furnace, form a very

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fine dust on condensation. The amount of silicon in dust is directly proportional to the ratio SiO_2/CaO in the furnace charge. To decrease the amount of silicon in dust, it is necessary to decrease the ratio SiO_2/CaO in the furnace charge and sublime phosphorus from ground and briquetted material, since the reduction of phosphorus in this case will take place at much lower temperatures than that of silica. The amount of alkalies in dust reaches 20%. With the increase of phosphorus slag basicity, the extent of sublimation of the alkalies increases. The sublimation of alkalies is related to their evaporation as oxides and cannot be explained by the formation of fluorides (second U.S. ref). The use of acid slag decreases the sublimation of alkalies, but it increases reduction of silica. Consequently, the problem in each individual case should be solved experimentally. The source of carbon, which constitutes 1/5 of dust, can be carbon monoxide, which under favorable conditions could be converted into CO_2 and carbon. The

latter is present in the dust as soot. The presence of iron, cobalt, and nickel facilitates the above conversion. On the other hand, carbon, aluminum oxide, and copper inhibit this conversion. Decreasing the passage time of gases through the temperature zone at which decomposition of the carbon monoxide takes place will decrease the amount of carbon soot in the dust. The structure of dust was studied with electron microscope; photographs are given in the article. There are 2 figures; 1 table; and 9 references, 7 Soviet, 2 U.S. The U.S. references are: Bixler, G. H., Ind. Eng. Ch., 48, 1, 2 (1956); Madorsky S., Ind. Eng. Ch., 23, 1 78 (1931).

SUBMITTED: February 14, 1959

ABLICHENKOV, F.I.; POSTNIKOV, N.N.

Simultaneous production of yellow phosphorus and argillaceous cement. Khim. prom. no.6:431-436 Je '64. (MIRA 18:7)

L 65098-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5021968 UR/0286/65/000/014/0013/0013
661.631.3.4

AUTHOR: Postnikov, N. N.; Ablichenkov, I. I.; Miniks, M. V.; Strel'tsov, A. N.; Bol'shakova, A. P.; Petrov, N. P.; Krasinskiy, I. Ya.

TITLE: A method for producing yellow phosphorus. Class 12, No. 172730 19 18 B

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 13

TOPIC TAGS: phosphorus, nonmetal element

ABSTRACT: This Author's Certificate introduces a method for producing yellow phosphorus from high-carbonate phosphorus raw material by volatilization in electric furnaces. The process is intensified by heat treating the raw material at 950--1050°C before charging the furnace.

ASSOCIATION: Nauchno-issledovatel'skiy institut po udobreniyam i insektofungisidam goskhimneftekomiteta pri Gosplane SSSR (Scientific Research Institute for Fertilizers and Insectofungicides, Goskhimneftekomitet, Gosplan SSSR); Leningradskiy gosudarstvennyy institut po proyektirovaniyu zavodov osnovnoy khimicheskoy promyshlen-

Card 1/2

L 65098-65

ACCESSION NR: AP5021968

nosti goskhimneftekomiteta pri Gosplane SSSR (Leningrad State Institute for the Planning of Factories for the Fundamental Chemical Industry, Goskhimneftekomitet, Gosplan SSSR)

SUBMITTED: 27Jan64 ENCL: 00 SUB CODE: IC, GC

NO REF SOV: 000 OTHER: 000

MLR

Card 2/2

POSTNIKOV, N.N.

Comments on P.V.Gel'd's note on the article "Comparative reduction of tricalcium phosphate by gaseous reducing agents - hydrogen, carbon monoxide - and solid carbon. Zhur. prikl. khim. 33 no.6:1430-1433 Je '60. (MIRA 13:8)

(Calcium phosphate) (Hydrogen)
(Carbon monoxide) (Carbon)

S/724/61/000/000/005/020

AUTHORS: Al'tman, M.B., Lotareva, O.B., Postnikov, N.S., Spiridonova, S.B.

TITLE: The cast Aluminum alloy BAA 4 [VAL4] (BA15 [VL15]).

SOURCE: Liteynyye alyuminiyevyye splavy; svoystva, tekhnologiya plavki, lit'ya i termicheskoy obrabotki. Sbornik statey. Ed. by I.N. Fridlyander and M.B. Al'tman. Moscow, Oborongiz, 1961, 43-51.

TEXT: The paper describes a new alloy of the system Al-Mg-Zn, developed by I.F. Kolobnev, M.B. Al'tman, and O.B. Lotareva to achieve better strength characteristics than those of the similar alloy A612F described in the ALCOA Aluminum Handbook, 1957. The technological properties of the new alloy permit its application over a wide range of casting dimensions and configurations. The alloy excels in the stability of its mechanical properties across the cross-section of a thick casting. The alloy machines and polishes well and is readily welded and brazed, all of which makes it suitable for complex parts of electrical and radio equipment. The step-by-step development of the alloy is described, leading up to the final composition of the alloy: 3.5-4.25% Zn, 1.5-2% Mg, 0.2-0.5% Mn, 0.1-0.2% Ti, the remainder Al. The alloy is essentially an Al-$Al_2Mg_3Zn_3$ alloy. The phase diagram of this type of alloy is examined to obtain guidance for a suitable heat treatment.

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S/724/61/000/000/005/020

The cast Alumium alloy....

A two-stage heating procedure prior to quench, comprising a heating to 475°C for 2 hrs and 580° for 3 hrs was selected, except that thin-walled parts, free of any local thickenings, can be heated directly to 580° for 5 hrs. Parts are then quenched and are maintained at 120° for 8 hrs to achieve a further strengthening. Air-cooling from 580° was also tested. The microstructure of the cast alloy consists of solid-solution grains, along the boundaries of which small quantities of $MgZn_2$ and impurities appear. After heat treatment, a $MgZn_2$ phase is no longer observed, and the amount of T phase is significantly reduced. Corrosion tests showed a corrosion resistance of the VAL4 alloy close to that of the AL2 and AL13 alloys, and, hence, far exceeding that of the ordinary cast alloys which contain Cu. The hermeticity of VAL4 is not outstandingly good; leakage began at 60- to 80-atm pressure, thus placing the VAL4 alloy into the same category as the AL7 and AL8 alloys. There are 4 figures, 3 tables, and 4 references (2 Russian-language Soviet and 2 English-language: Metallurgia, v.51, no.306, 1955, and the ALCOA Aluminum Handbook, 1957).

Card 2/2

AL'TMAN, M.B.; LOTAREVA, O.B.; POSTNIKOV, N.S.; Prinimali uchastiye: SPIRIDONOVA, S.B.; LOKTIONOVA, L.I.

High-strength BAL2 alloy. Alium. splavy no.1:5-13 '63. (MIRA 16:11)

S/724/61/000/000/019/020

AUTHORS: Lotareva, O.B., Postnikov, N.S., Loktionova, L.I.

TITLE: The properties of Al alloys cast by various casting methods.

SOURCE: Liteynyye alyuminiyevyye splavy; svoystva, tekhnologiya plavki, lit'ya i termicheskoy obrabotki. Sbornik statey. Ed. by I.N. Fridlyander and M.B. Al'tman. Moscow, Oborongiz, 1961, 157-170.

TEXT: The paper describes an experimental investigation of the effects of various types of casting techniques on the standard USSR Al alloys АЛ (AL) -2, -3, -4, -5, -7, -8, and -9, cast in ethylsilicate molds, by the lost-wax process, and in shell molds, and of the new alloys AL19 and AL21 cast according to new methods. It is found that the standard alloys all satisfy the requirements of the All-Union Standard (GOST) 2685-53, regardless of the casting method. The use of the lost-wax method was limited to small parts and to rods with a cross-shaped cross-section. A broad range of mold temperatures (T) from 20 to 350°C was tested, and the tensile strength and elongation of the resulting specimens were measured in the standard heat-treated state of each alloy. A mold T of up to 300° was found to have but little influence on the mechanical properties of the alloys investigated. At higher mold T a loss in mechanical properties is found. A comparison of the

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The properties of Al alloys cast by various ....

fluidity of the alloys in pouring into shell molds and ethylsilicate molds showed a fluidity somewhat greater than when pouring was done into sand molds. Typical comparison of the length of spirals cast for the AL7 alloy: 575 mm in a shell mold, against 508 mm in a sand mold. The mechanical properties of specimens 5-mm in diameter made of AL9 alloy cast into gypsum molds do not differ from the properties of the same alloy when cast into a sand mold. In 8-mm and 12-mm diam specimens some small impairment in mechanical properties is observed. A 10-15% impairment in mechanical properties is noted in alloys AL19 and AL21 cast into gypsum molds. It was also noted that any heating of the gypsum molds impairs the mechanical properties of 8-mm-diam and, even more appreciably, of 12-mm-diam specimens made of the latter 2 alloys, whereas the properties of 5-mm-diam specimens is not affected thereby. The fluidity (and, therefore, pourability) of the AL9, AL19, and AL21 alloys in pouring into either cold or heated gypsum molds exceeds that observed in pouring into sand molds by several times. For example, the length of an AL9 spiral cast in a gypsum at 20°C is 1,500 mm, as against 550 mm in a sand mold. The same ratio of appx. 3:1 prevails in the other 2 alloys, also. A time-and-temperature study was made of the heat-absorption capabilities of the various molds, and it was found that the heat is taken from the casting most rapidly by the ethylsilicate mold, then by the shell mold, and lastly by the gypsum mold. This is interpreted as an explanation of the relatively low mechanical

properties of castings made in gypsum molds and the practically identical properties obtained in castings made in a sand mold, a shell mold, and an ethylsilicate mold. There are 6 figures, 7 tables, and 4 references (3 Russian-language Soviet and 1 English-language group: Brown, H., Foundry, Jan. 1950, 74; Light Metals, Nov. 1952, 365; Foundry, Sep. 1956, 104). The participation of V. G. Baradan'yants in the present project, and his development of the method for making the various types of molds, is acknowledged.

BOGOYAVLENSKIY, Konstantin Nikolayevich; ZHALOBOV, Viktor Vladimirovich; DERGACHEV, Vladimir Ivanovich; ZUBTSOV, Mikhail Yefimovich; LANDIKHOV, Aleksandr Denisovich; POSTNIKOV, Nikolay Nikolayevich; MILLER, L.Ye., red.; EL'KIND, L.M., red.izd-va; ISLENT'YEVA, P.G., tekhn.red.

[Working nonferrous metals and alloys by pressure] Obrabotka tsvetnykh metallov i splavov davleniem. [By] K.N. Bogoiavlenskii i dr. Izd.2., perer. i dop. Moskva, Metallurgizdat, 1964. 564 p. (MIRA 17:3)

ACCESSION NR: AP4040688 S/0129/64/000/006/0015/0018

AUTHOR: Al'tman, M. B.; Postnikov, N. S.; Loktionova, L. I.

TITLE: Airtight casting alloy of the Al-Si-Mg system

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 6, 1964, 15-18

TOPIC TAGS: aluminum alloy, aluminum silicon magnesium alloy, VAL5 alloy, beryllium containing alloy, titanium containing alloy, alloy property

ABSTRACT: An investigation showed that beryllium and titanium, when added to the Al-Si-Mg alloy, contributed to grain refining and increased alloy strength. The maximum strength of 33.5 kg/mm^2 of solution-annealed and aged alloy was attained at 0.15—0.4% Be and 0.15% Ti, while the strength of the alloy with 0.5—1% Be without titanium was only 27—29 kg/mm^2. To obtain a 50—60% eutectic (for higher airtightness), the content of silicon should be limited to 6.5—8.5%. Although magnesium silicide is the main strengthening phase, the magnesium content should not exceed 0.55%. Higher magnesium contents result in

Card 1/2

L 21144-65 EPR/EWT(m)/EWP(b)/EWA(d)/EWP(t) Ps-4 IJP(c)/AFTC(p) JD
ACCESSION NR: AP5001337 S/0128/64/000/012/0032/0033

AUTHOR: Postnikov, N. S. (Engineer); Zakharov, A. Z. (Engineer)

TITLE: The tightness of cast aluminum alloys

SOURCE: Liteynoye proizvodstvo, no. 12, 1964, 32-33

TOPIC TAGS: aluminum alloy, cast aluminum alloy, alloy permeability, alloy property/VAL-5 aluminum alloy, AL2 aluminum alloy, AL9 aluminum alloy, AL5 aluminum alloy, AL4 aluminum alloy, VAL 4 aluminum alloy, AL7 aluminum alloy, AL8 aluminum alloy, AL8U aluminum alloy, AL19 aluminum alloy, AL22 aluminum alloy

ABSTRACT: Hydraulic and pneumatic pressure tests of the VAL5, AL2, AL9, AL5, and AL4 cast aluminum alloys with composition close to eutectics have shown that tightness depends upon many factors, such as alloy composition, crystallization range, casting method, metal strength, quality, and heat treatment. The as-cast alloys with casting skin have a tightness 2—3 times higher than the machined alloys. The new VAL-5 cast aluminum alloy (6.5—8.5% Si, 0.35—0.55%

Card 1/2

L 21144-65
ACCESSION NR: AP5001337

Mg, 0.15—0.4% Be, 0.1—0.3% Ti, rest—Al) has a narrow crystallization range and is 30—50% stronger than other indicated alloys; it also had the highest tightness. Its machined castings with 2.5-mm wall thickness failed only under 170—180 atm. pressure, and those with 4-mm wall thickness withstood a pressure over 300 atm. No leakage or failure was observed in production-scale tests on VAL-5 alloy T-pieces at 450 atm. The highest permeability was observed in AL7, AL8, AL8U, AL19, and AL22 alloy castings which, depending upon their wall thickness and state of surface, leaked under 10—100 atm. pressure. Among the alloys with a wide crystallization range, the as-cast cast, heat-treated, VAL4 alloy of the Al-Zn-Mg system was found to have the lowest permeability: no leakage was observed at 200 atm hydraulic pressure or at 30 atm air pressure. Orig. art. has: 5 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 005 OTHER: 000 ATD PRESS: 3165

Card 2/2

POSTNIKOV, P.A.

Make wider use of the air-blast cleaning of switches. Put' i put. khoz. 8 no.3:30 '64. (MIRA 17:3)

1. Nachal'nik Leningrad-Moskovskoy distantsii puti Oktyabr'skoy dorogi.

POSTNIKOV, S.A.; Prinimal uchastiye ZYKOV, K.D.

Cannon net. Trudy OGZ no.4:395-401 '62. (MIRA 17:9)

FOSS, V.L.; KUDINOVA, V.V.; POSTNIKOVA, G.B.; LUTSENKO, I.F.

Derivatives of β-ketophosphinic acids. Dokl. AN SSSR 146 no.5: 1106-1108 O '62. (MIRA 15:10)

(Phosphinic acid)

GASHUNIN, V.F.; POSTNIKOV, O.K.; MAKOVSKAYA, R.P., red.

[Controlling noise and vibrations] Bor'ba s shumom i vibratsiei; tema V. Uchebnoe posobie po kursu "Tekhnika bezopasnosti" dlia studentov zaochnogo i vechernego otdeleniia. Moskva, Mosk. poligr. in-t, 1963. 22 p. (MIRA 16:9)
(Printing industry--Hygienic aspects)
(Noise) (Vibration)

POSTNIKOV, Oleg Konstantinovich; MIL', A.A., inzh., retsenzent; LANKAU, A.N., red.; BORISOVA, V.Y., tekhn.red.

[Design and use of DP printing presses] Ustroistvo i ekspluatatsiia pechatnykh mashin tipa DP. Moskva, Gos.izd-vo "Iskusstvo," 1959. 166 p. (MIRA 13:5)

(Printing press)

POSTNIKOV, O. K.

Postnikov, O. K.

"Investigation of the Basic Parameters and Methods of Calculating Cardboard - Cutting Machines. Min Higher Education USSR. Moscow Polygraphics Inst. Moscow, 1955 (Dissertation for the degree of Candidate in Technical Science)

SO: Knizhnaya letopis' No. 27, 2 July 1955

POSTNIKOV, O.K., kand.tekhn.nauk

Modernizing and designing cardboard-cutting machines. Nauch. trudy MPI no.7/8:3-28 '58. (MIRA 14:12)
(Cutting machines)

POSTNIKOV, P. A.

"Redesigning the Control Levers and the Seats of the Engineer and His Assistant in a Locomotive From the Hygienic Point of View." Cand Med Sci, First Moscow Medical Inst, Moscow, 1955. (KL, No 12, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

POSTNIKOV, P. E. POSTNIKOV, P. F.

15 15 27 18 18

9
4E2c
4E3d

144. Selection of refractories for the lining of copper-melting reverberatory furnaces.—I. P. Bas'yas, M. M. Dvorkind, I. G. Sarkisov, and P. F. Postnikov (*Ogneupory*), 22, 301, 1957). In Russian. Since conditions of service in the furnace vary, it is suggested that different refractories should be used in different parts of the furnace to give a uniform life. Bungs in the 1st and 2nd roof-sections should be lined with magnesite-chrome panels (1·2–1·5 m wide), the central part of the first 2 roof-sections and the 3rd section with forsterite (18 in. long); the 4th and 5th sections with silica (18 in. long), and the rest of the roof with silica (15 or 12 in. long). The walls above the bath should be lined with forsterite. (5 figs., 5 tables.)

POSTNIKOV, P. F.

BAS'YAS, I.P.; DVORKIND, M.M.; SARKISOV, I.G.; POSTNIKOV, P.F.

Efficient choice of refractories for laying a copper smelting reverberatory furnace. Ogneupory 22 no.7:301-306 '57. (MLRA 10:8)

1. Ural'skoye otdeleniye instituta ogneuporov (for Bas'yas and Dvorkind). 2. Krasnoural'skiy medeplavil'nyy zavod (for Sarkisov and Postnikov).
(Smelting furnaces) (Refractory materials)

POSTNIKOV, P. F.

9
1-42 Rc

The rational choice of refractories for lining the reverberatory furnaces of copper smelters. I. P. Ilgu'yan, M. M. Dvorkind, I. G. Sarkisov, and P. F. Postnikov. *Ogneupory* 22, 301-9(1957).—Results of observation and study of the condition of different refractory materials after service in the walls and arches of Cu reverberatory furnaces lead to the conclusion that forsterite bricks are much more resistant to heat erosion than "Dinas" (a Russian silica refractory brick of compn. SiO_2 95.1, Al_2O_3 0.9, and Fe_2O_3 1.4%) although they yield to chrome-magnesite in this respect. Dinas bricks in high service differ little from ordinary types, eroding mainly through fusion. Forsterite and chrome-magnesite bricks in service take on a more clearly defined zonal structure than Dinas. Photomicrographs show the presence of zones of spinel, chromite, glass, cuprite, periclase, etc. Erosion takes the form of scaling. A rational scheme provides for lining the charging end of the 1st and 2nd sections of the arch with panels of chrome-magnesite 1.2 to 1.5 m. wide, the central part of the 1st 2 sections of the arch and the entire 3rd section (including the charging end) with forsterite bricks 400 mm. long, the 4th and 5th sections with Dinas brick of the same length, and the rest of the arch with Dinas 300 to 330 mm. in length. The walls, above the level of the charge, should be constructed of forsterite brick. H. L. Oën

POSTNIKOV, R. P. Doc Med Sci -- (diss) "The problem of the pathogenesis of obliterating thromboangiitis (thromboangioneurosis (endarteritis)) and its rational treatment." Len, 1956. 22 pp 20 cm. (Min of Health RSFSR. Len Sanitary Hygiene Med Inst), 125 copies

(KL, 7-57, 108)

12

SMIRNOV, A.V.; POSTNIKOV, R.P.

Primary and secondary cavernotomies and complications. Trudy LSGMI 39:189-194 '58. (MIRA 12:8)

1. Kafedra gospital'noy khirurgii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav.kafedroy - z.d.n., prof.A.V.Smirnov).
(TUBERCULOSIS, PULMONARY, surgery, cavernotomy, compl. (Rus))

POSTNIKOV, R.P.

Pathogenic problems in obliterating thromboangioneurosis (endarteritis) and effective therapy. Trudy LSGMI 39:220-236 '58. (MIRA 12:8)

1. Kafedra gospital'noy khirurgii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav.kafedroy - z.d.n., prof.A.V.Smirnov) i Otdel farmakologii Instituta eksperimental'noy meditsiny AMN SSSR (zav.otdelom - deystv. chlen AMN SSSR, prof.S.V.Anichkov).
(THROMBOANGIITIS OBLITERATERNS, pathogen. & ther. (Rus))

POSTNIKOV, R.P., professor

Solitary cysts of the kidneys and perirenal cellular tissue. Vest.khir. no.6:96-98 '62. (MIRA 15:11)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. R.P. Postnikov) Chitinskogo meditsinskogo instituta
(KIDNEYS—TUMORS) (CYSTS)

POSTNIKOV, R.P., kand.med.nauk

Pathogenesis and treatment of endarteritis obliterans. Trudy LSGMI 33:117-129 '56. (MIRA 10:12)

1. Gospital'naya khirurgicheskaya klinika Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.(zav. klinikoy - zasluzhennyy deyatel' nauki, prof. A.V.Smirnov)
(THROMBOANGIITIS OBLITERANS,
pathogen. & ther.)

POSTNIKOV, R.P., kandidat meditsinskikh nauk.

Sugar in the blood during endarteritis obliterans. Vest. khir. 76 no.11:34-37 '55. (MLRA 9:4)

1. Iz gospital'noy khirurgicheskoy kliniki (dir.-professor A.V. Smirnov) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.

(ENDARTERITIS OBLITERANS, blood in sugar level)
(BLOOD SUGAR, in various dis. endarteritis obliterans)

POSTNIKOV, R.P., kandidat meditsinskikh nauk.

Endarteritis obliterans; review of foreign literature. Vest. khir. 76 no.11:140-145 '55. (MLRA 9:4)

(ENDARTERITIS OBLITERANS
review)

POSTNIKOV, R.P., doktor med.nauk

Diagnosis and treatment of generalized biliary peritonitis without perforation of the bile ducts. Vest.khir. 85 no.11:33-37 N '60. (MIRA 14:2)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. A.V. Smirnov) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta i gospital'noy khirurgicheskoy kliniki (zav. - doktor med.nauk R.P. Posgnikov) Chitinskogo meditsinskogo instituta.
(PERITONITIS)

SOV-2-58-7-5/14

AUTHORS: Matyukha, I., Postnikov, S. and Samoylov, V.

TITLE: From the History of Family Budget Statistics of the Population of the USSR (Iz istorii statistiki byudzhetov naseleniya v SSSR)

PERIODICAL: Vestnik statistiki, 1958, Nr 7, pp 37 - 50

ABSTRACT: This is a detailed report on the development of statistical inquiries on family budgets. At present the budgets of 20.2 thousand typical workers families and 25.9 thousand kolkhoz families are questioned systematically every year on their economic situation, real income, etc. During the Soviet regime the following statisticians have carried out special statistical investigations on family budgets: Academician S.G. Strumilin, N.I. Dubinskaya, A.Ye. Lositskiy and others. There are 3 Soviet references.

Card 1/1

POSTNIKOV, S.

Labor and Laboring Classes

New stage in the development of budgetary statistics on workers, employees, and collective farmers. Vest. stat., No. 6, 1951.

Monthly List of Russian Accessions, Library of Congress, March 1952, Unclassified.

05909

9(SOV/107-59-7-12/42

AUTHOR: Postnikov, S., Category I Judge, Secretary of the Main Board of Judges

TITLE: The Results of the 12th All-Union Radio Operator Correspondence Contest

PERIODICAL: Radio, 1959, Nr 7, p 13 (USSR)

ABSTRACT: The author reports the results of the 12th All-Union radio operator correspondence contest in which 22,168 people participated. He mentions a number of radio operators who scored remarkable results: D. Malomuzh (Odessa), A. Sidorenko (Vladivostok), N. Napylov (Yaroslavl'), V. Solov'yeva (Murmansk), A. Stukalina (Vladivostok), Yu. Kapustin (Kaluga), G. Rassadin, G. Patko, V. Somov, N. Yemshanov, Z. Voytenko, M. Tkhor', A. Glotova, N. Mavridis, V. Tatarinov, V. Pavlysheva, G. Yarovenko, Ya. Gekht, M. Iridis. In the team competition, first place was taken by the Moscow City Radio Club (G. Patko, M. Makeyeva, V.

Card 1/2

The Results of the 12th All-Union Radio Operator Correspondence Contest

Pavlysheva, G. Rassadin, A. Krotov), second by the Radio Club of the Primorskiy Kray (A. Stukalina, N. Kostina, V. Orover, V. Kuligin, A. Sidorenko), and third by the Irkutsk Radio Club (N. Mavridis, M. Idrisov, Ye. Sayfusheva, V. Piyetskaya and V. Lastovka). The fourth place was taken by a Yakutsk team and the fifth by Leningrad radio operators.

POSTNIKOV, S.

Auditing

How to organize better the inspection of workers', employees', and farmers' budgets. Vest. stat. No. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1953. Unclassified.

POSTNIKOV, S.A., inzh.

River harbors. Mekh. i avtom. proizv. 17 no.6:28-32 Je '63.
(MIRA 16:7)

(Harbors--Equipment and supplies)
(Loading and unloading)

AYZENVARG, Ye.V.; POSTNIKOV, S.A., redaktor; SEMENOVA, M.M. redaktor; VOLKOVA, Ye., tekhnicheskiy redaktor.

[Manual for the operator of a steam crane] Uchebnik dlia kranovshchika parovogo krana. Moskva, Gos. izd-vo vodnogo transporta, 1954. 207 p. (MLRA 7:12)
(Cranes, derricks, etc.)

BELOV, Mikhail Ivanovich, dotsent, kand.tekhn.nauk; KALININ, B.A., retsenzent; YUMIN, N.A., retsenzent; POSTNIKOV, S.A., red.; MAKRUSHINA, A.M., red.izd-va; YERMAKOVA, T.T., tekhn.red.

[Organization and technical standardization in stevedoring] Organizatsiia truda i tekhnicheskoe normirovanie na peregruzochnykh rabotakh. Moskva, Izd-vo "Rechnoi transport," 1959. 166 p. (MIRA 12:11)

(Docks) (Loading and unloading)

VAL'KOV, Grigoriy Petrovich; KAZANTSEV, A.M., dotsent, kand.tekhn.nauk, retsenzent; POSTNIKOV, S.A., inzh., retsenzent; RZHECHITSKIY, B.D., inzh., red.; MAKHOSHINA, A.N., red.izd-va; BOBROVA, V.A., tekhn.red.

[Organization and mechanization of cargo operations] Organizatsiia i mekhanizatsiia gruzovykh rabot. Moskva, Izd-vo "Rechnoi transport," 1959. 388 p. (MIRA 12:4)

(Cargo handling)

POSTNIKOV, Sergey Andreyevich; ZABOLOTSKIY, Sergey Nikolayevich; TUROV, S.S., doktor biol. nauk, prof., red.; KREKSHINA,L., red.

[Stories of a Meshchera pathfinder] Rasskazy meshcherskogo sledopyta. Moskva, Mosk. rabochii, 1964. 143 p. (MIRA 18:1)

POSTNOV, S.D., dots.

Effectiveness of the pillar system for mining thin flat seams of the Bulanash deposit. Izv.vys.uchab.zav.; gor.zhur. no.3: 35-46 '59. (MIRA 13:4)

1. Sverdlovskiy gornyy institut imeni V.V.Vakhrusheva. Rekomendovana kafedroy razrabotki plastovykh mestorozhdeniy.
(Sverdlovsk Province--Coal mines and mining)

POSTNIKOV S.N.

KALININ, Boris Arkhipovich; ITTENBERG, I.A., retsenzent; POSTNIKOV, S.N., red.; LOBANOV, Ye.M., red.izd-va; TSVETKOVA, S.V., tekhn.red.

[Principles of setting production standards for loading and unloading work] Osnovy tekhnicheskogo normirovaniia pogruzochno-razgruzochnykh rabot. Izd.2-oe, perer.i dop. Moskva, Izd-vo "Rechnoi transport," 1957. 107 p. (MIRA 11:1)

(Loading and unloading)

S/697/61/000/000/003/018
D228/D303

AUTHORS: Bibikova, V. I., Oleynikova, K. V., Postnikova, S. V. and Khazanova, T. P.

TITLE: Behavior of rhenium during the roasting of molybdenite concentrates and technologic methods of obtaining it

SOURCE: Akademiya nauk SSSR. Institut metallurgii im. A. A. Baykova. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov. Mezhduvedomstvennaya komissiya po redkim metallam. Vsesoyuznoye soveshchaniye po probleme reniya. Moscow, 1958. Reniy; trudy soveshchaniya. Moscow, Izd-vo AN SSSR, 1961, 37-41

TEXT: The authors describe their investigation of: (a) distribution of Re in almost all molybdenite concentrates being processed in the USSR, (b) distribution of Re in Cu-Mo ore from three beneficiation plants, and (c) general behavior of Re during the roasting of molybdenite concentrates. They also suggest certain refinements in the production technique for Re. Concentrates from deposits in

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D228/D303

Armenia, Kazakhstan and Uzbekistan are characterized by rather high Re contents which exceptionally rise to 0.1%; in those from other Siberian and Far Eastern deposits, however, the maximum concentration was not found to exceed 90 p.p.m. Data given in a table show that in the case of ore from three beneficiation plants the Mo-fraction holds up to 5 times as much Re as the Cu-fraction. Graphs are presented to illustrate the higher vapor-tension of Re_2O_7 as compared with MoO_3 at different temperatures. The authors stress the need for an excess of air during the roasting of concentrates if the formation of ReO_3 and ReO_2, which have a lower vapor-tension, is to be avoided. It is also noted that Re is most fully sublimated in furnaces of the boiling-layer type; here, 95% of the metal passes into gaseous phase, whence it is best recovered by means of a wet Cottrell filter or a rapid foam-bubbler. Turning to the question of Re production technology, which is at present largely governed by the high and low solubilities of Re_2O_7 and $KReO_4$, the authors describe their attempts to reduce $KReO_4$ and

Behavior of rhenium ...

NH_4ReO_4 with H_2. This was done in 2 two-hourly stages -- first at 480 - 500°C, and then at 900 - 1000°C. Washing the resulting powder with HCl increases the purity of Re, but decreases the direct yield of metal from 95 - 98 to 92 - 93%. There are 2 tables and 1 figure.

Card 3/3

3508
S/697/61/000/000/009/018
D228/D303

AUTHORS: Bibikova, V. I., Postnikova, S. V. and Oleynikova, K.V.

TITLE: Methods of preparing rhenium of high purity

SOURCE: Akademiya nauk SSSR. Institut metallurgii im. A. A. Baykova. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov. Mezhduvedomstvennaya komissiya po redkim metallam. Vsesoyuznoye soveshchaniye po probleme reniya. Moscow, 1958. Reniy; trudy soveshchaniya. Moscow, Izd-vo AN SSSR, 1961, 75-80

TEXT: The aim of this work, which was carried out at the Giredmet (State Institute of Reduction Metallurgy), was to obtain metal containing minimal amounts of K and Ca and <5 p.p.m. Pb, Sn, Cd, Bi, and Sb. The separation of metals by sublimation is largely governed by their vapor tensions at high temperatures, as is shown diagramatically for As, Pb, Sn, Bi, and Sb in the temperature range 350 - 2300°C. One method recommended by the authors consists of

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Methods of preparing ...

the vacuum heating of compressed Re powder for 2 hours to a temperature of 2500°C; the metal thus obtained is 99.988% pure. No attempt was made to determine the content of the gases, but the data of C. T. Sims et al. are quoted in this respect. The results of the study of the effect of the temperature and duration of heating on the removal of Pb and 12 other elements are illustrated by means of graphs and tables. They indicate that equally pure Re can be prepared at a lower temperature (~2050°C) if the period of heating is increased to 4 - 6 hours. Further data are then adduced to show that the K and Ca contents of metallic Re can be lowered to <0.02 and 0.002% respectively by means of a method, entailing the redn. of NH_4ReO_4 with H_2 and the subsequent heating of the residue to 1600 - 2500°C in vacuo. There are 2 figures, 4 tables, and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc. /Abstracter's note: One of the non-Soviet-bloc references is a Russian translation. / The references to the English-language publications read as follows: E. M. Sherwood, D. M. Rosenbaum and J. M. Blocher, J. electrochem. Soc., 102, no. 11, 650, (1955); C. T. Sims, J. Metals, January, 168, (1955).

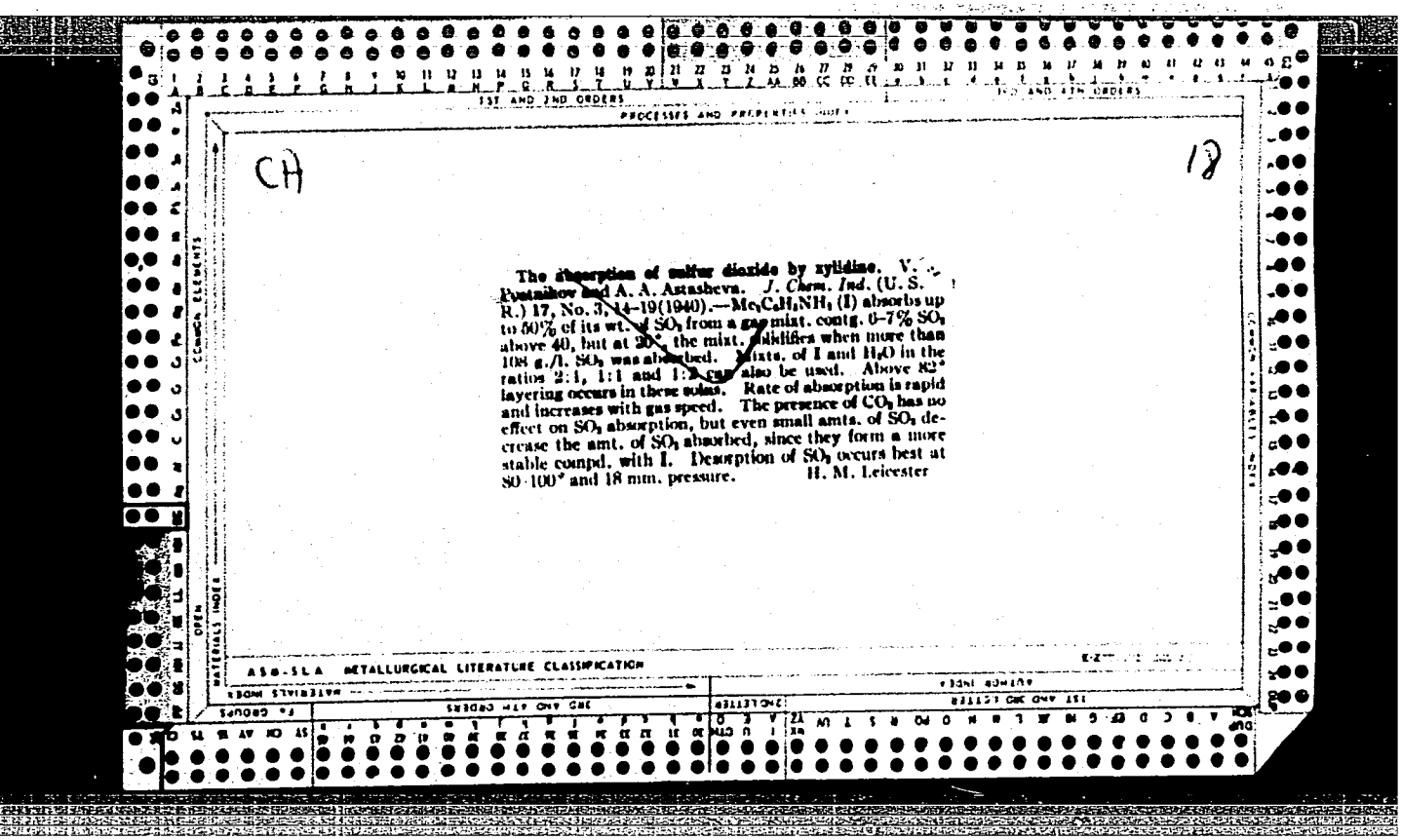
Card 2/2

LETENKO, V.; SAVITSKIY, P.; POSTNIKOV, V.

Economic efficiency of radioisotopes in industry. Vop.ekon. no.9:132-136 S '59. (MIRA 12:12)
(Radioisotopes--Industrial application)

POSTNIKOV, V. (Stavropol')

Aleksandra Astankova. Radio no.12:10 D '53. (MLRA 6:12)
(Astankova, Aleksandra)



CH

18

The absorption of sulfur dioxide by xylidine. V. Postnikov and A. A. Astasheva. *J. Chem. Ind.* (U. S. R.) 17, No. 3, 14–19(1940).—$Me_2C_6H_3NH_2$ (I) absorbs up to 50% of its wt. of SO_2 from a gas mixt. contg. 6–7% SO_2 above 40, but at 20° the mixt. solidifies when more than 108 g./l. SO_2 was absorbed. Mixts. of I and H_2O in the ratios 2:1, 1:1 and 1:2 can also be used. Above 82° layering occurs in these solns. Rate of absorption is rapid and increases with gas speed. The presence of CO_2 has no effect on SO_2 absorption, but even small amts. of SO_2 decrease the amt. of SO_2 absorbed, since they form a more stable compd. with I. Desorption of SO_2 occurs best at 80–100° and 18 mm. pressure. H. M. Leicester

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

S/694/62/000/119/003/003
E193/E383

AUTHOR: Postnikov, V.A., Engineer

TITLE: Analysis of the mechanism for withdrawing the mandril in XПТ (KhPT) [cold tube-rolling] stands

SOURCE: Sverdlovsk. Ural'skiy politekhnicheskiy institut. Trudy. no. 119. 1962. Raschet i konstruirovaniye oborudovaniya metallurgicheskikh predpriyatiy. 67-77

TEXT: The present paper is concerned with the equipment for fabricating tapered tubes with either constant or varying wall thickness. Tubes of varying wall thickness are produced by the process in which a suitably shaped mandrel is gradually withdrawn from the tube being rolled. Equipment for fabricating tubes of this type has been designed and constructed at the Uralmashzavod. The basic part of the equipment is the mechanism that synchronizes the withdrawal of the mandrel with the rolling process. Two variations of this mechanism, one incorporating "komandoapparats", the other selsyns, have been constructed and a schematic plan of the rolling stand incorporating the latter variation is given in the paper. Operational experience has shown that the various

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S/694/62/000/119/003/003
E193/E383

Analysis of ....

parts of the stand do not function in accordance with the prediction based on theoretical calculations and this often results in faulty operation of the synchronizing mechanism. The object of the investigation described in the present paper was to carry out an analytical study of the function of the equipment in order to obtain data that could be used both to improve the design of the equipment and to ensure its satisfactory functioning under various conditions. The theoretical part of the investigation included an assessment of the factual displacement of the mandrel and forces acting in the mechanism, accurate calculation of the weight which motivated the mandrel withdrawing mechanism and derivation of the relationship between the displacement of the tube and the mandrel. The theoretical analysis was supplemented by experiments in which various parameters of the rolling process and operation of the mandrel withdrawing mechanism were determined. The main conclusions reached were that tubes with uniformly varying wall thickness could not be produced on stands incorporating the komandoapparats and that the main cause of faulty functioning of equipment incorporating selsyns was the adoption of

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S/694/62/000/009/003/003
E193/E383

Analysis of ....

dead weight to motivate the mandrel withdrawing mechanism. One way of eliminating this source of failure, suggested by the Pervoural'skiy novotrubnyy zavod (Pervoural' New Tube-producing Works), is to transmit the force to the lead screw of the mandril-holder via a self-braking worm gear directly from an electric motor. There are 6 figures and 3 tables.

Card 3/3

POSTNIKOV, V.A.

Size of the crystals in fluid-bed crystallizing apparatus.
Khim.prom. no.11:853-856 '63. (MIRA 17:4)

SOKOLOVSKIY, V.I., kand.tekhn.nauk, POSTNIKOV, V.A., inzh.

Investigating the rolling of conic pipes. Trudy Ural.politekh. inst. no.101:54-67 '60. (MIRA 14:3)
(Pipe mills)

POSTNIKOV, V A

S/122/61/000/006/007/011
D244/D301

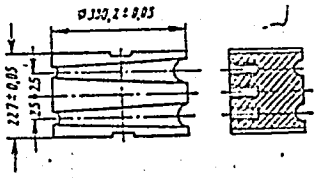
AUTHORS: Sokolovskiy, V.I., Levaynem, A.G., Odintsov, B.P., Goronkov, Ye. S., and Postnikov, V.A.

TITLE: 2-pass cold rolling of tubes

PERIODICAL: Vestnik mashinostroyeniya, no. 6, 1961, 50-52

TEXT: Simultaneous cold rolling of 2 tubes, i.e. 2-pass rolling, has been carried out at the Pervoural'skiy novotrubnyy zavod (Pervoural New Tube Plant) using a PC (RS) 2 1/2" mill. This has resulted in a considerably increased output. Fig. 1 shows the grooves for 2-pass rolling, and Fig. 2 the structure of the shaft carrier.

Fig. 1. Grooves for 2-pass rolling.



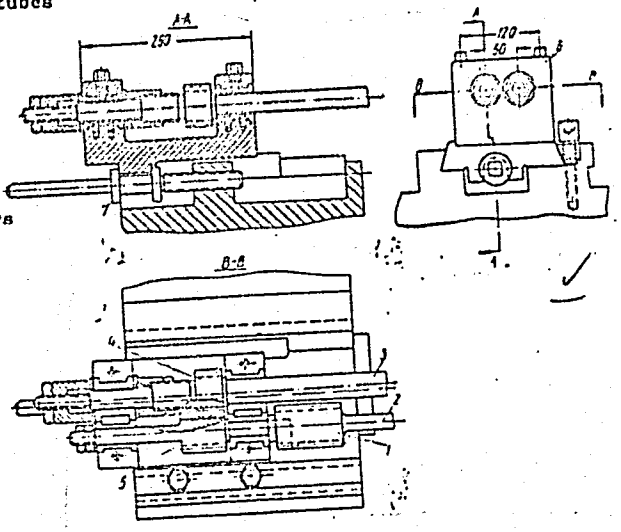
The roll revolution is transmitted by the gearbox 1 to the stem of plunger 2 and further to plunger 3 through the gearbox pair 4 and 5. The plunger 3 can move relative to plunger

Card 1/3 (For Fig. 2 see next card)

2-pass cold rolling of tubes

Fig. 2. Structure of the shaft carrier.

2 during adjustment of the mill by 25 mm so as to compensate for any inaccuracies in the mandrels. The housing 6, in which the plungers are accomodated, can be moved by means of screw 7 in order to set the mill to the required wall thickness of the tube. It was found that the output of the mill can be still further increased by



Card 2/3

S/122/61/000/006/007/011
D244/D301

2-pass cold rolling of tubes

installing a more powerful pneumatic carrier drive. Further, in order to prevent flush formation and thus improve the quality of the tubes, rotation of the tube due to mandrel rotation should be prevented and a forward holder should be set up which would ensure gripping and turning of 2 tubes simultaneously. The construction of such a holder is also illustrated. There are 4 figures.

Card 3/3

SOKOLOVSKIY, V.I., kand.tekhn.nauk, dotsent; LEVAYNEM, A.G., QDINTSOV, B.P.; GORONKOV, Ye.S., inzh.; POSTNIKOV, V.A.; Prinimali uchastiye: STASEVICH, P.K.; KASIMOV, V.V.; RAYT, Ya. F.

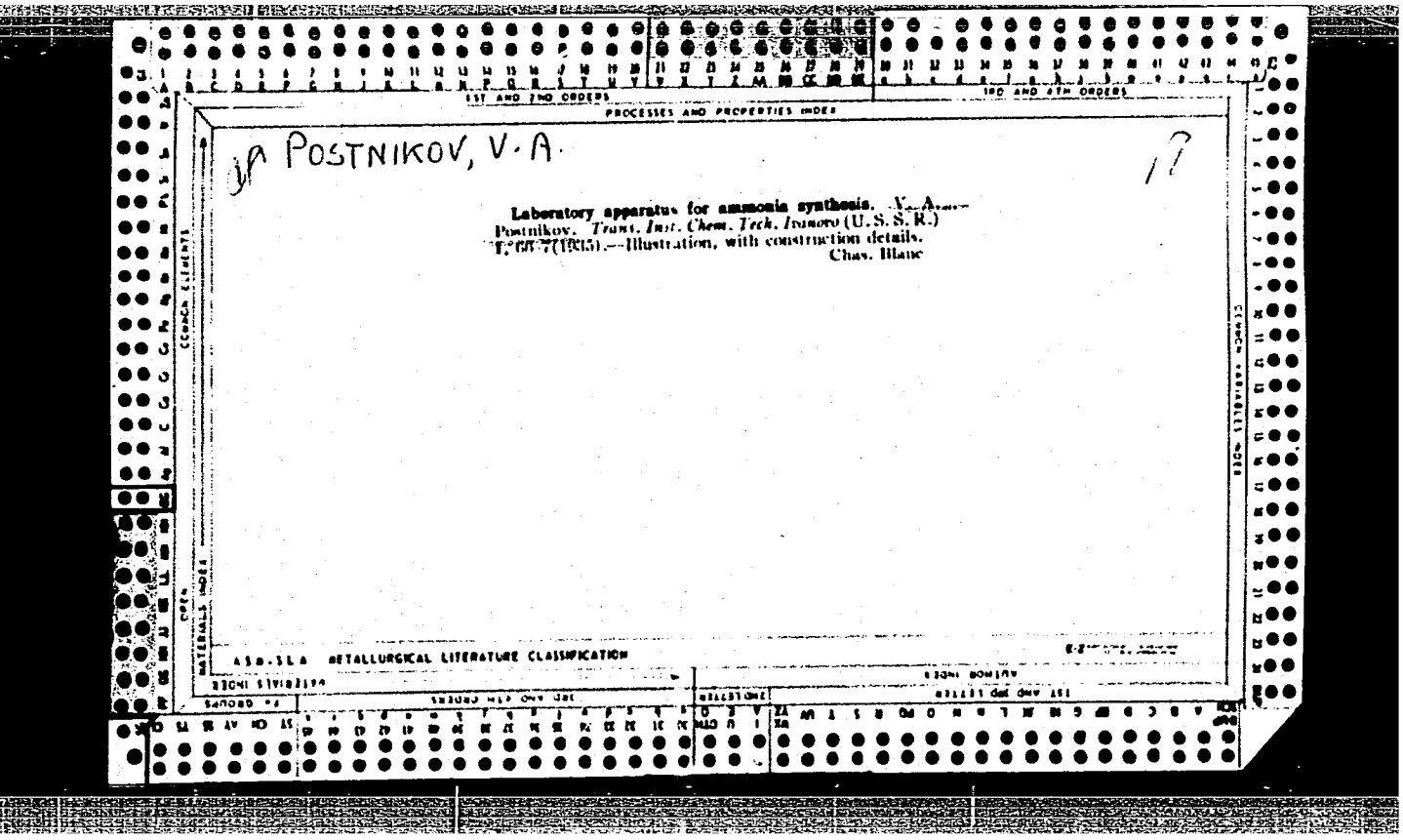
Two-groove cold rolling of pipes. Vest. mash. 41 no.6:50-52 Je '61. (MIRA 14:6)

(Rolling (Metalwork))

POSTNIKOV, V.A.; MATUSEVICH, L.N.

Crystallization in a fluidized bed. Khim.prom. no.11:802-805 N '62. (MIRA 16:2)

(Crystallization) (Fluidization)



PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

jA POSTNIKOV, V.A.

17

Laboratory apparatus for ammonia synthesis. V. A. Postnikov. *Trans. Inst. Chem. Tech. Ivanovo* (U. S. S. R.) 1, 67–7(1945).—Illustration, with construction details.
Chas. Blanc

SOKOLOVSKIY, V.I., kand. tekhn. nauk; POSTNIKOV, V.A., inzh.

Experimental investigation of power consumption in cold pipe rolling. Izv. vys. ucheb. zav.; mashinostr. no.1:212-217 '65.
(MIRA 18:5)

POSTNIKOV, V. A., inzh.

Analyzing the mechanism of mandrel shifting for KhPT mills. Trudy Ural'. politekh. inst. no.119:67-77 '62. (MIRA 16:1)

(Pipe mills)

POSTNIKOV, V. F.

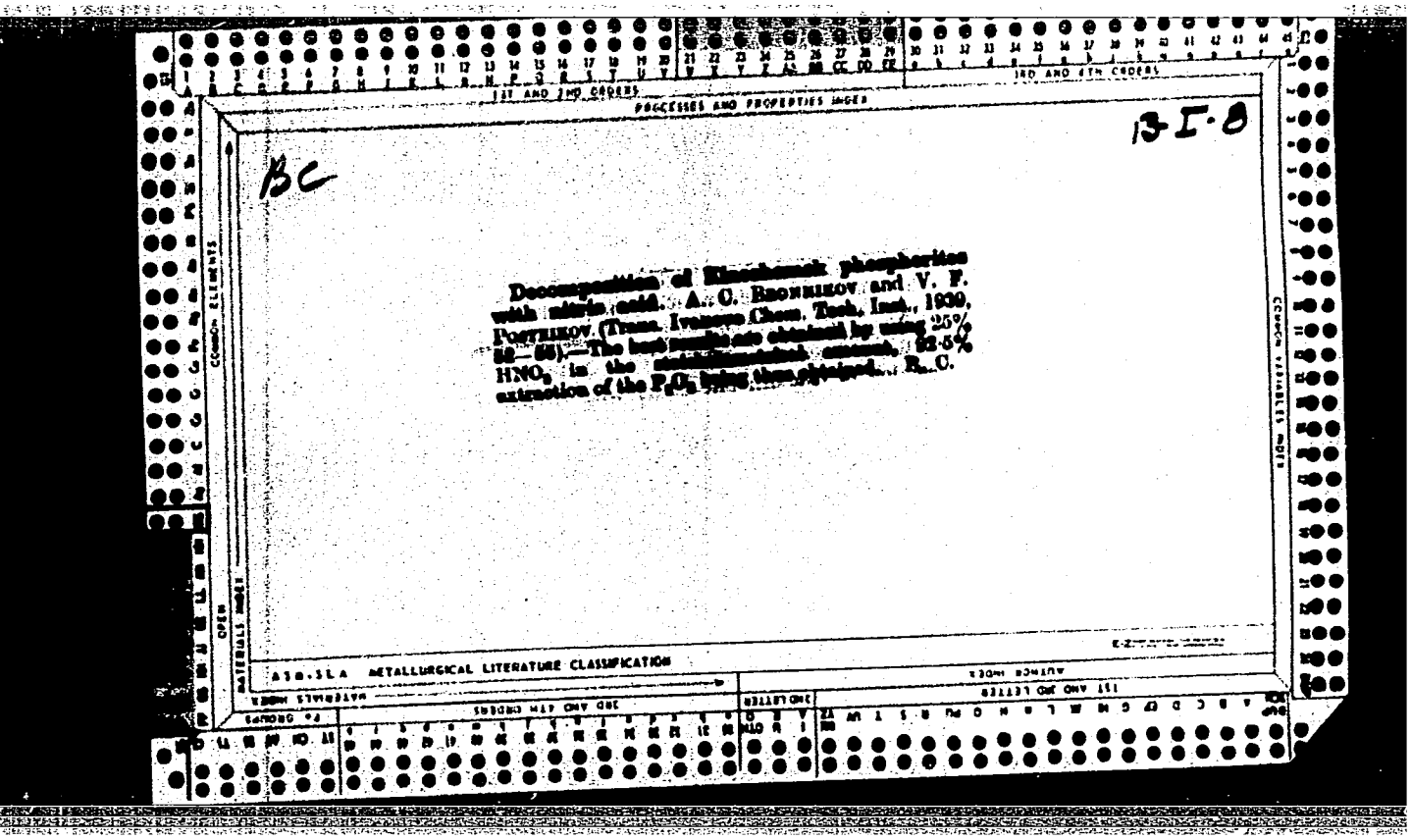
"The Obtaining of $PbCl_4$, H_2PbCl_6 and $(NH_4)_2PbCl_6$, and Certain Properties of these Compounds," Zhur. Obshch. Khim., 10, No. 14, 1940. Ivanovo Chemico-Technological Inst. Received 9 March 1940.

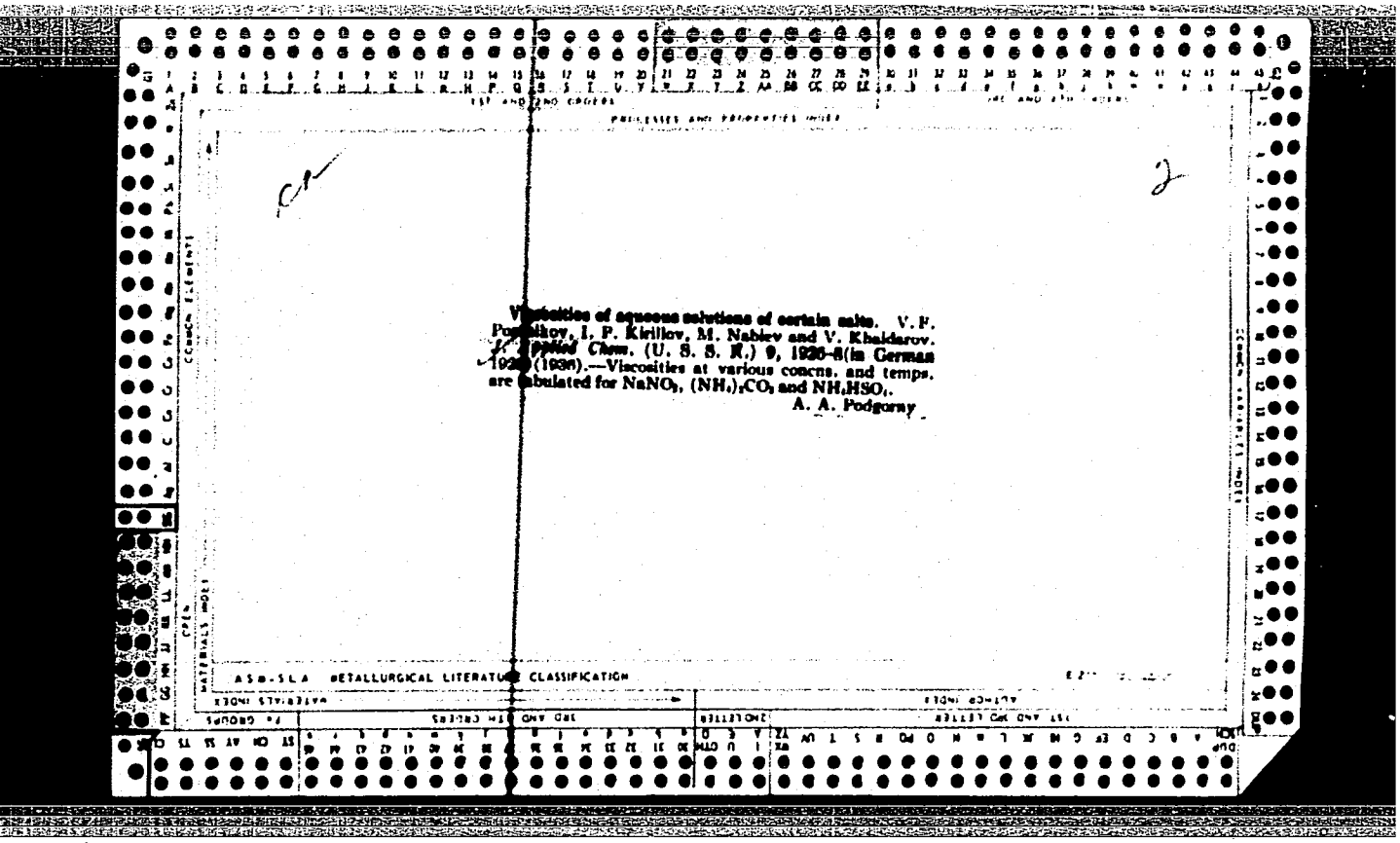
Report U-1610, 3 Jan. 1952.

POSTNIKOV, V.F.: SPERANSKIY A.I.

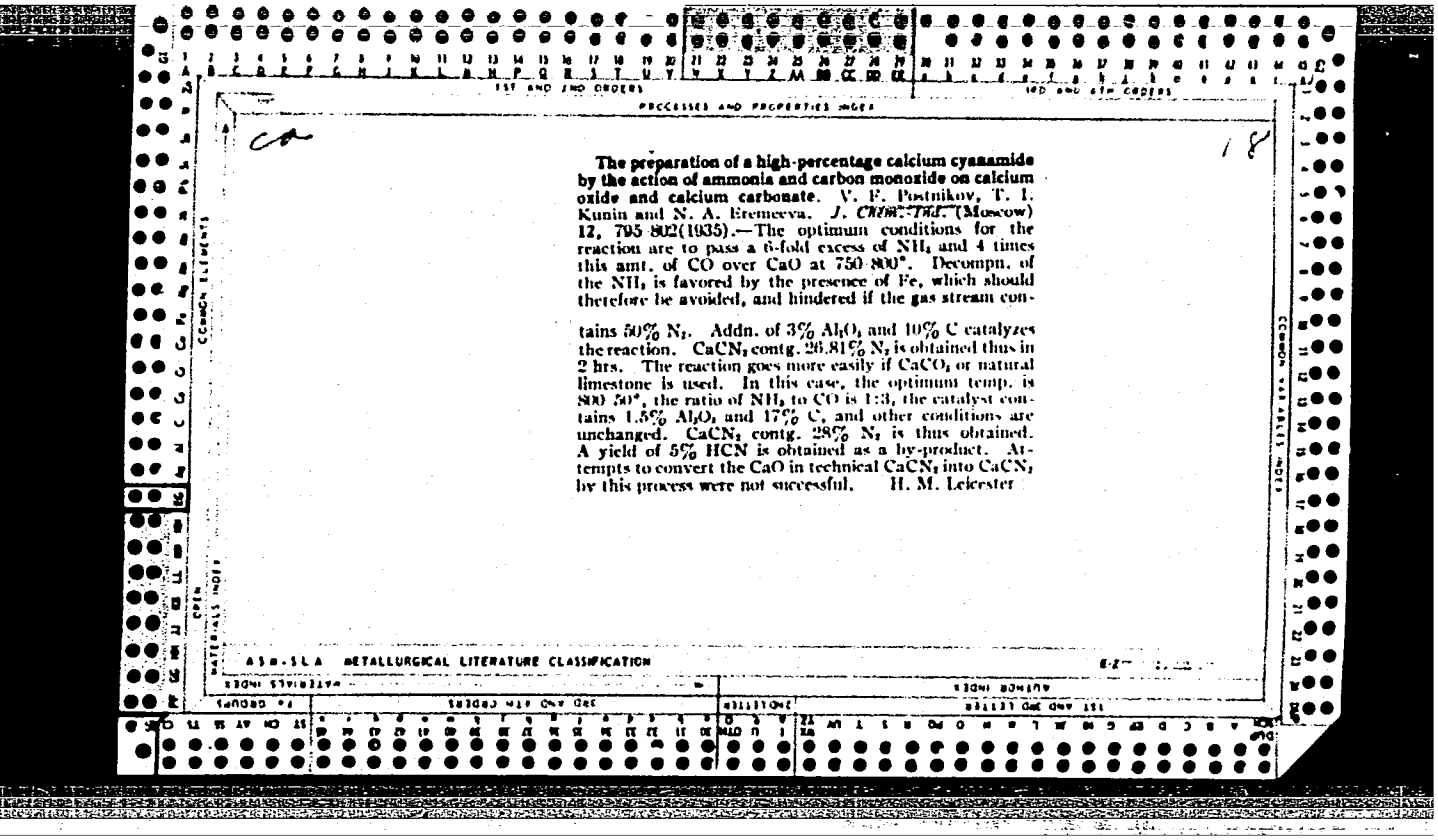
"The Obtaining of $PBCl_4$, H_2PbCl_6 and $(NH_4)_2PbCl_6$, and Certain Properties of these Compounds." Zhur. Obshch. Khim., 10, No.14, 1940. Ivanovo Chemico-Technological Inst. rcd. 9 March 1940.

Report U-1610, 3 Jan. 1952.

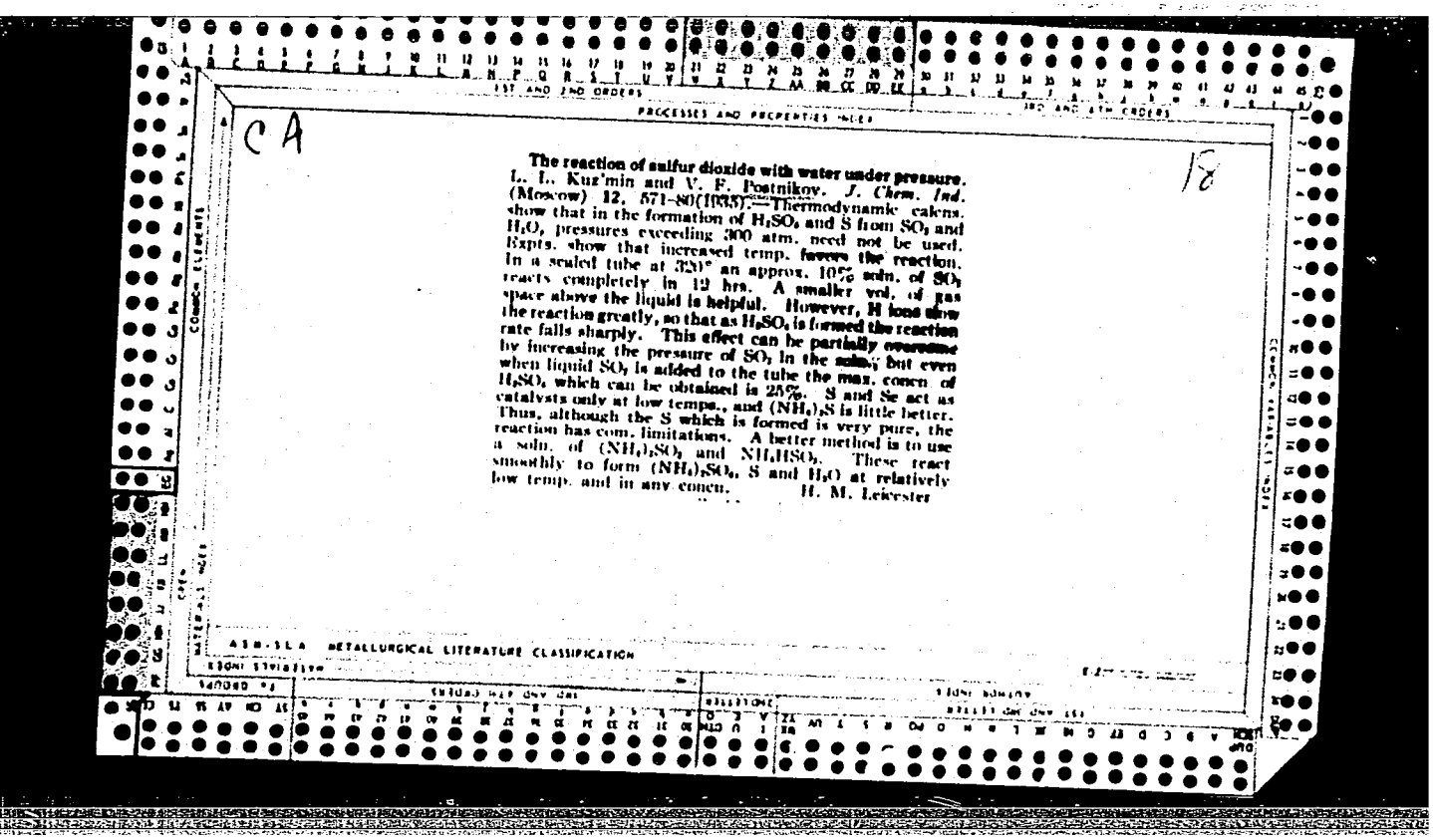




Viscosities of aqueous solutions of certain salts. V. F. Popelkov, I. P. Kirillov, M. Nabiev and V. Khaldarov. J. Applied Chem. (U. S. S. R.) 9, 1926-8(in German 1929) (1936).—Viscosities at various concns. and temps. are tabulated for $NaNO_3$, $(NH_4)_2CO_3$ and NH_4HSO_4.
A. A. Podgorny



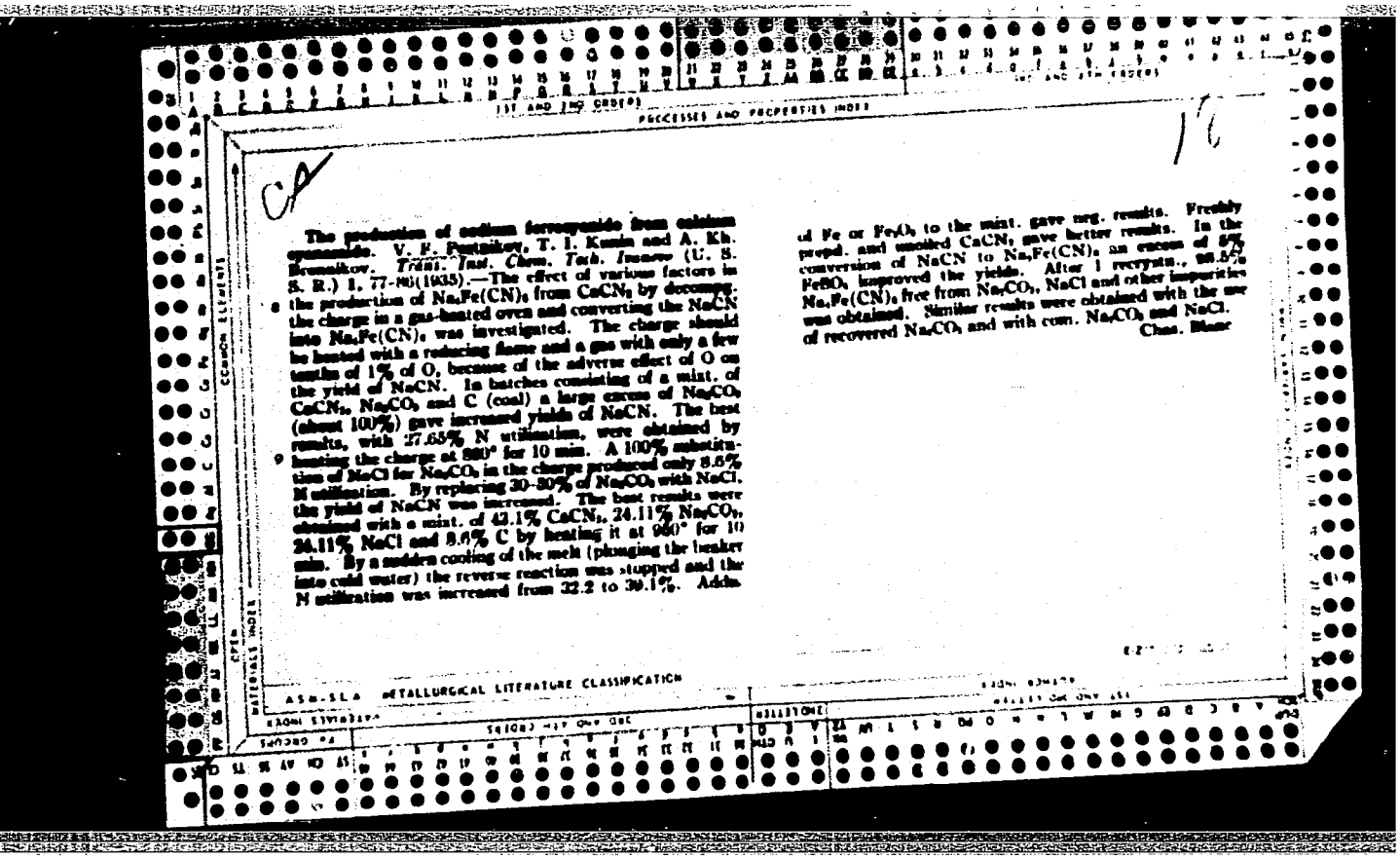
The preparation of a high-percentage calcium cyanamide by the action of ammonia and carbon monoxide on calcium oxide and calcium carbonate. V. F. Postnikov, T. I. Kunin and N. A. Eremeeva. *J. Chem. Ind.* (Moscow) 12, 795-802(1935).—The optimum conditions for the reaction are to pass a 6-fold excess of NH_3 and 4 times this amt. of CO over CaO at 750-800°. Decompn. of the NH_3 is favored by the presence of Fe, which should therefore be avoided, and hindered if the gas stream contains 50% N_2. Addn. of 3% Al_2O_3 and 10% C catalyzes the reaction. $CaCN_2$ contg. 26.81% N_2 is obtained thus in 2 hrs. The reaction goes more easily if $CaCO_3$ or natural limestone is used. In this case, the optimum temp. is 800-50°, the ratio of NH_3 to CO is 1:3, the catalyst contains 1.5% Al_2O_3 and 17% C, and other conditions are unchanged. $CaCN_2$ contg. 28% N_2 is thus obtained. A yield of 5% HCN is obtained as a by-product. Attempts to convert the CaO in technical $CaCN_2$ into $CaCN_2$ by this process were not successful. H. M. Leicester



CA

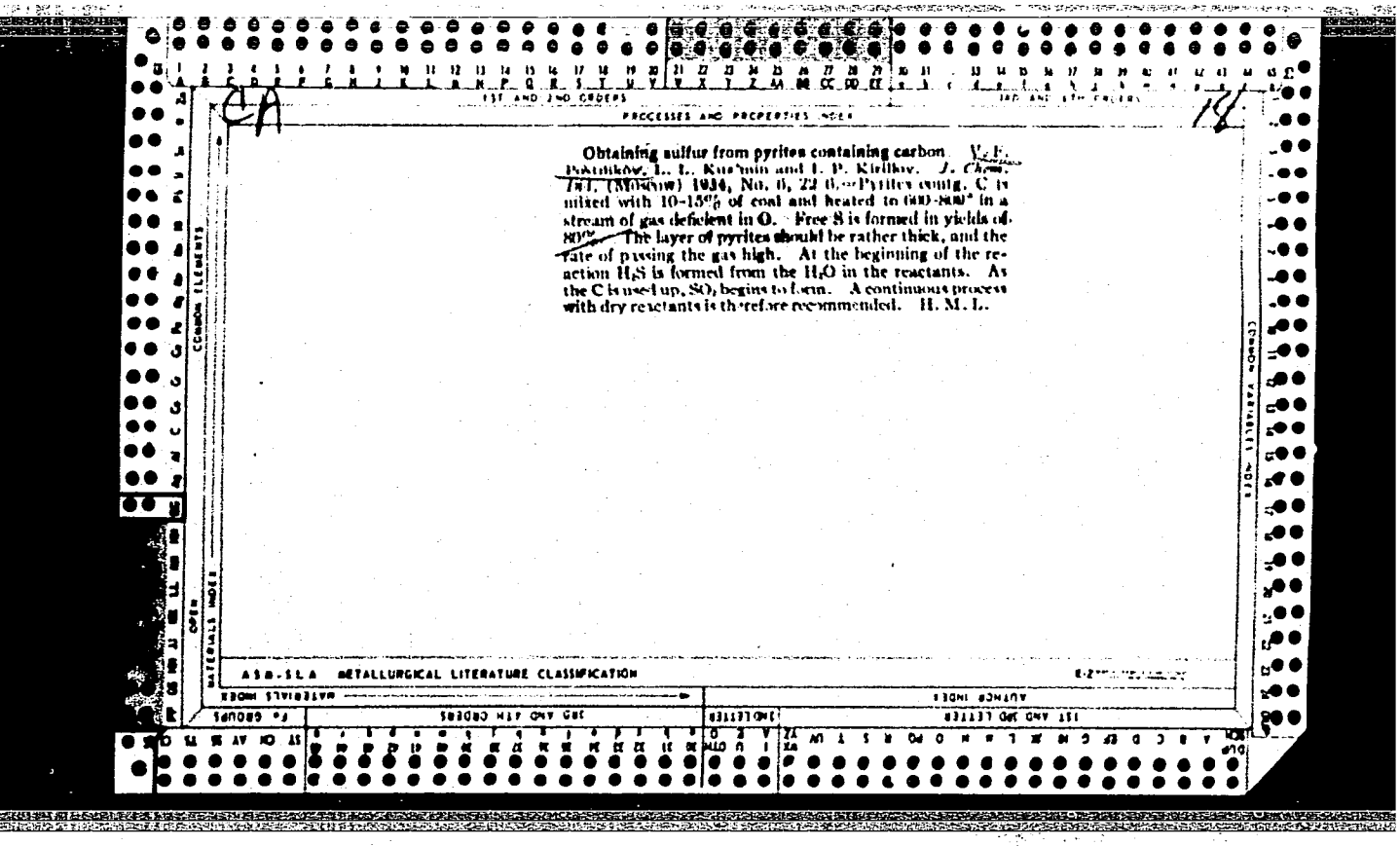
The reaction of sulfur dioxide with water under pressure. L. L. Kuz'min and V. F. Postnikov. *J. Chem. Ind.* (Moscow) **12**, 571–80(1935).—Thermodynamic calcns. show that in the formation of H_2SO_4 and S from SO_2 and H_2O, pressures exceeding 300 atm. need not be used. Expts. show that increased temp. favors the reaction. In a sealed tube at 320° an approx. 10% soln. of SO_2 reacts completely in 12 hrs. A smaller vol. of gas space above the liquid is helpful. However, H ions slow the reaction greatly, so that as H_2SO_4 is formed the reaction rate falls sharply. This effect can be partially overcome by increasing the pressure of SO_2 in the soln., but even when liquid SO_2 is added to the tube the max. concn. of H_2SO_4 which can be obtained is 25%. S and Se act as catalysts only at low temps., and $(NH_4)_2S$ is little better. Thus, although the S which is formed is very pure, the reaction has com. limitations. A better method is to use a soln. of $(NH_4)_2SO_3$ and NH_4HSO_3. These react smoothly to form $(NH_4)_2SO_4$, S and H_2O at relatively low temp. and in any concn.

H. M. Leicester



The production of sodium ferrocyanide from calcium cyanamide. V. F. Puntikov, T. I. Kunin and A. Kh. Breusnikov. *Trans. Inst. Chem. Tech. Ivanovo* (U. S. S. R.) 1, 77-80(1933).—The effect of various factors in the production of $Na_4Fe(CN)_6$ from $CaCN_2$ by decomposing the charge in a gas-heated oven and converting the NaCN into $Na_4Fe(CN)_6$ was investigated. The charge should be heated with a reducing flame and a gas with only a few tenths of 1% of O_2, because of the adverse effect of O on the yield of NaCN. In batches consisting of a mixt. of $CaCN_2$, Na_2CO_3 and C (coal) a large excess of Na_2CO_3 (about 100%) gave increased yields of NaCN. The best results, with 27.65% N utilization, were obtained by heating the charge at 980° for 10 min. A 100% substitution of NaCl for Na_2CO_3 in the charge produced only 8.6% N utilization. By replacing 30–80% of Na_2CO_3 with NaCl the yield of NaCN was increased. The best results were obtained with a mixt. of 43.1% $CaCN_2$, 24.11% Na_2CO_3, 24.11% NaCl and 8.6% C by heating it at 980° for 10 min. By a sudden cooling of the melt (plunging the beaker into cold water) the reverse reaction was stopped and the N utilization was increased from 22.2 to 30.1%. Addn. of Fe or Fe_2O_3 to the mixt. gave neg. results. Freshly prepd. and unroasted $CaCN_2$ gave better results. In the conversion of NaCN to $Na_4Fe(CN)_6$ an excess of 6% $FeBO_3$ improved the yields. After 1 recrystn., 99.5% $Na_4Fe(CN)_6$ free from Na_2CO_3, NaCl and other impurities was obtained. Similar results were obtained with the use of recovered Na_2CO_3 and with com. Na_2CO_3 and NaCl.

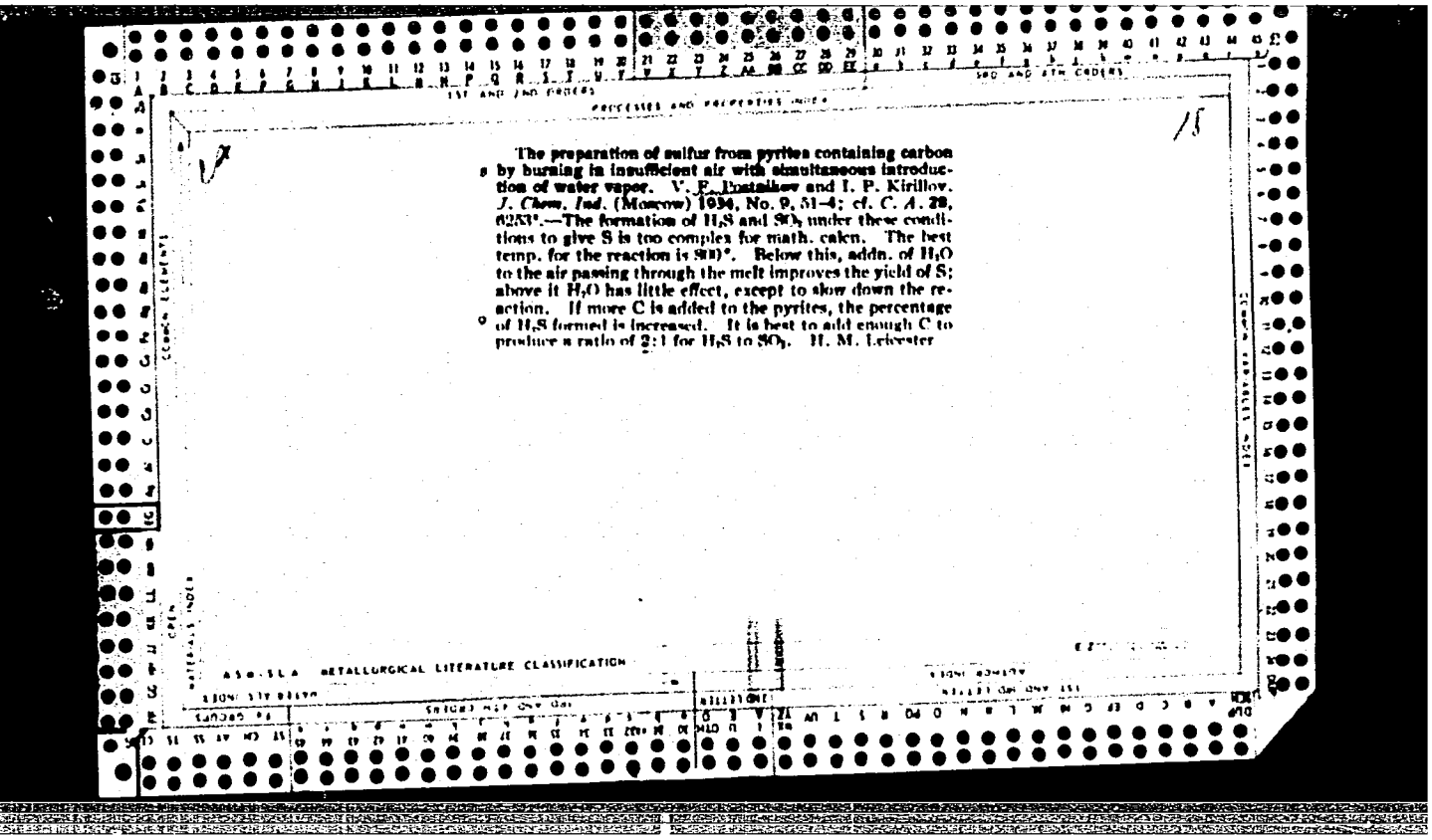
Chas. Blanc



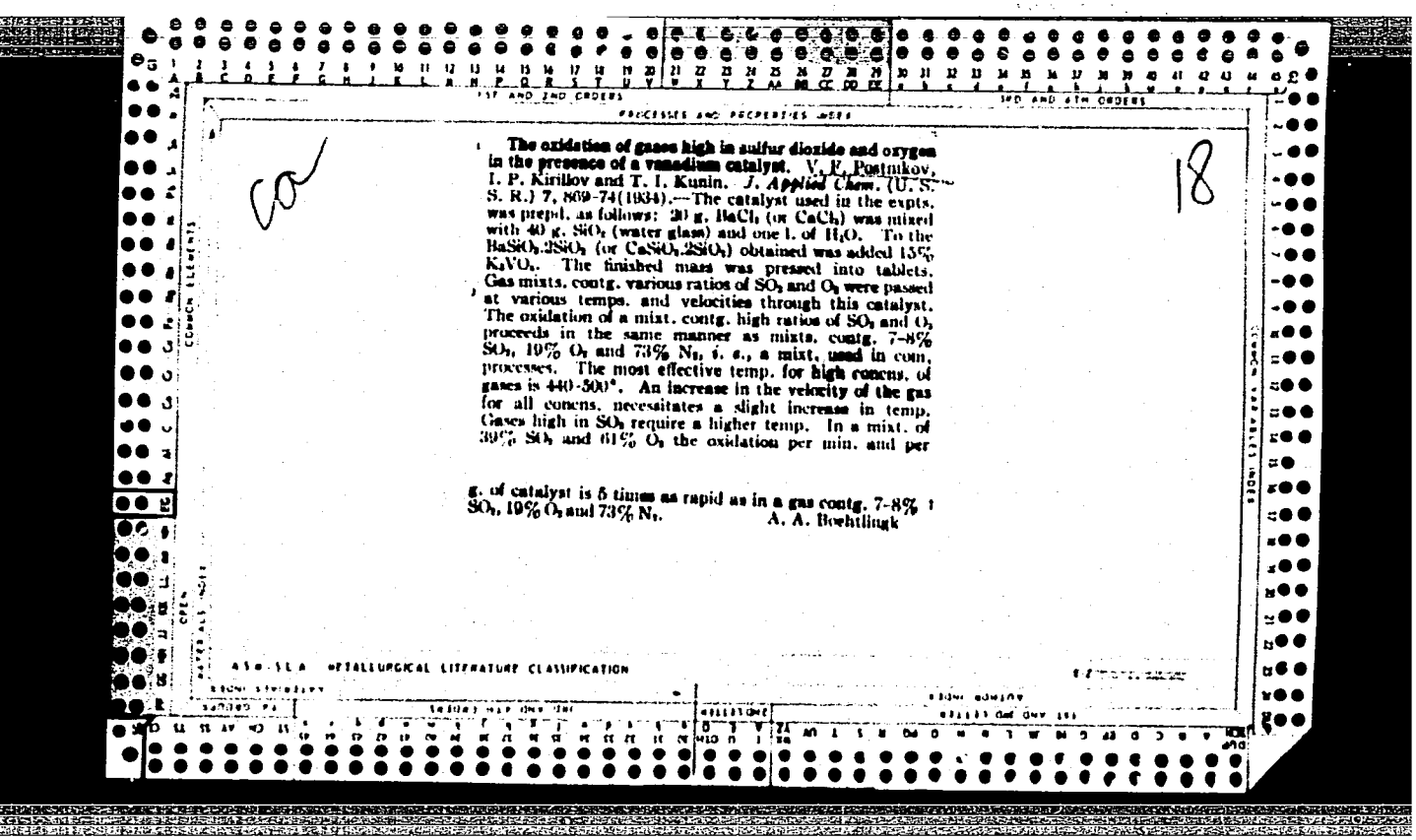
PROCESSES AND PROPERTIES INDEX

Obtaining sulfur from pyrites containing carbon. V. F. Pavlikov, L. L. Kuz'min and I. P. Kirilov. *J. Chem. Ind.* (Moscow) **1934**, No. 6, 22 6.—Pyrites cntng. C is mixed with 10–15% of coal and heated to 600–800° in a stream of gas deficient in O. Free S is formed in yields of 80%. The layer of pyrites should be rather thick, and the rate of passing the gas high. At the beginning of the reaction H_2S is formed from the H_2O in the reactants. As the C is used up, SO_2 begins to form. A continuous process with dry reactants is therefore recommended. H. M. L.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



The preparation of sulfur from pyrites containing carbon by burning in insufficient air with simultaneous introduction of water vapor. V. E. Postnikov and I. P. Kirillov. *J. Chem. Ind.* (Moscow) 1934, No. 9, 51–4; cf. *C. A.* **28**, 6253⁹.—The formation of H_2S and SO_2 under these conditions to give S is too complex for math. calcn. The best temp. for the reaction is 900°. Below this, addn. of H_2O to the air passing through the melt improves the yield of S; above it H_2O has little effect, except to slow down the reaction. If more C is added to the pyrites, the percentage of H_2S formed is increased. It is best to add enough C to produce a ratio of 2:1 for H_2S to SO_2. H. M. Leicester



The oxidation of gases high in sulfur dioxide and oxygen in the presence of a vanadium catalyst. V. F. Postnikov, I. P. Kirillov and T. I. Kunin. *J. Applied Chem.* (U. S. S. R.) 7, 869-74(1934).—The catalyst used in the expts. was prepd. as follows: 20 g. $BaCl_2$ (or $CaCl_2$) was mixed with 40 g. SiO_2 (water glass) and one l. of H_2O. To the $BaSiO_3.2SiO_2$ (or $CaSiO_3.2SiO_2$) obtained was added 15% K_4VO_3. The finished mass was pressed into tablets. Gas mixts. contg. various ratios of SO_2 and O_2 were passed at various temps. and velocities through this catalyst. The oxidation of a mixt. contg. high ratios of SO_2 and O_2 proceeds in the same manner as mixts. contg. 7–8% SO_2, 10% O_2 and 73% N_2, i. e., a mixt. used in com. processes. The most effective temp. for high concns. of gases is 440-500°. An increase in the velocity of the gas for all concns. necessitates a slight increase in temp. Gases high in SO_2 require a higher temp. In a mixt. of 39% SO_2 and 61% O_2 the oxidation per min. and per g. of catalyst is 5 times as rapid as in a gas contg. 7–8% SO_2, 10% O_2 and 73% N_2.

A. A. Boehtlingk